TABLE OF CONTENTS
Soil Descriptions – Non-Technical

Aitkin County, Minnesota 2
Anoka County, Minnesota 44
Becker County, Minnesota 55
Beltrami County, Minnesota 56
Benton County, Minnesota 57
Big Stone County, Minnesota 67
Blue Earth County, Minnesota 68
Brown County, Minnesota 69
Carlton County, Minnesota 70
Carver County, Minnesota 71
Cass County, Minnesota 72
Chippewa County, Minnesota 73
Chisago County, Minnesota 74
Clay County, Minnesota 99
Clearwater County, Minnesota 136
Cook County, Minnesota 173
Cottonwood County, Minnesota 187
Crow Wing County, Minnesota 188
Dakota County, Minnesota 189
Dodge County, Minnesota 246
Douglas County, Minnesota 247
Faribault County, Minnesota 248
Fillmore County, Minnesota 273
Freeborn County, Minnesota 274
Goodhue County, Minnesota 275
Grant County, Minnesota 276
Hennepin County, Minnesota 277
Houston County, Minnesota 364
Hubbard County, Minnesota 365
Isanti County, Minnesota 421
Itasca County, Minnesota 422
Jackson County, Minnesota 423
Kanabec County, Minnesota 439
Kandiyohi County, Minnesota 440
Kittson County, Minnesota 475
Koochiching County, Minnesota 476
Lac qui Parle County, Minnesota 477
Lake County, Minnesota 511
Lake of the Woods County, Minnesota 512
Le Sueur County, Minnesota 513
Lincoln County, Minnesota 514
Lyon County, Minnesota 515
McLeod County, Minnesota 539
Mahnomen County, Minnesota 567
Marshall County, Minnesota 568
Martin County, Minnesota 569
Meeker County, Minnesota 593
Mille Lacs County, Minnesota 644
Morrison County, Minnesota 645
Mower County, Minnesota 646
Murray County, Minnesota 670
Nicollet County, Minnesota 671
Nobles County, Minnesota 700
Norman County, Minnesota 701
Olmsted County, Minnesota 702
Otter Tail County, Minnesota 703
Pennington County, Minnesota 704
Pine County, Minnesota 705
Pipestone County, Minnesota 706
Polk County, Minnesota 707
Pope County, Minnesota 708
Red Lake County, Minnesota 709
Redwood County, Minnesota 710
Renville County, Minnesota 711
Rice County, Minnesota 752
Rock County, Minnesota 753
Roseau County, Minnesota 754
St. Louis County, Minnesota 801
Scott County, Minnesota 802
Sherburne County, Minnesota 803
Sibley County, Minnesota 837
Stearns County, Minnesota 860
Steele County, Minnesota 861
Stevens County, Minnesota 862
Swift County, Minnesota 863
Todd County, Minnesota 906
Traverse County, Minnesota 907
Wabasha County, Minnesota 928
Wadena County, Minnesota 929
Waseca County, Minnesota 930
Washington/Ramsey Counties, Minnesota 979
Watonwan County, Minnesota 980
Wilkin County, Minnesota 1009
Winona County, Minnesota 1043
Wright County, Minnesota 1044
Yellow Medicine County, Minnesota 1123

Soil Descriptions - Non Technical

72--Shooker Very Fine Sandy Loam

Component Description

Shooker and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; very fine sandy loam
H2--9 to 27 inches; sandy clay loam
H3--27 to 60 inches; loam

119C--Pomroy Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Pomroy and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; loamy fine sand
H2--4 to 15 inches; loamy fine sand
H3--15 to 22 inches; loamy sand
H4--22 to 44 inches; sandy loam
H5--44 to 60 inches; sandy loam

124--Brickton Silt Loam

Component Description

Brickton and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:

H1--0 to 11 inches; silt loam
H2--11 to 32 inches; silty clay
H3--32 to 60 inches; clay

133B--Dalbo Very Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Dalbo and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 13 inches; very fine sandy loam
H2--13 to 35 inches; silty clay
H3--35 to 60 inches; silty clay loam

142--Nokay Fine Sandy Loam

Component Description

Nokay and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 6 inches; fine sandy loam
H2--6 to 12 inches; sandy loam
H3--12 to 19 inches; sandy loam
H4--19 to 44 inches; sandy loam
H5--44 to 60 inches; sandy loam

144B--Flak Sandy Loam, 3 To 8 Percent Slopes

Component Description

Flak and similar soils
Extent: 90 percent of the unit
Slope range: 3 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 3 inches; sandy loam

H2--3 to 13 inches; sandy loam
H3--13 to 22 inches; sandy loam
H4--22 to 45 inches; sandy loam
H5--45 to 60 inches; sandy loam

144C--Flak Sandy Loam, 8 To 15 Percent Slopes

Component Description

Flak and similar soils
Extent: 90 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 5 inches; sandy loam
H3--5 to 16 inches; sandy loam
H4--16 to 34 inches; sandy loam
H5--34 to 60 inches; sandy loam

146B--Wabedo Sandy Loam, 1 To 6 Percent Slopes

Component Description

Wabedo and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 5 inches; sandy loam
H2--5 to 27 inches; sandy loam
H3--27 to 47 inches; sandy loam
H4--47 to 60 inches; sandy loam

147--Spooner Silt Loam

Component Description

Spooner and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 4 inches; silt loam
H2--4 to 10 inches; silt loam

H3--10 to 29 inches; silt loam
H4--29 to 60 inches; silty clay loam

152B--Milaca Fine Sandy Loam, 3 To 8 Percent Slopes

Component Description

Milaca and similar soils
Extent: 85 percent of the unit
Slope range: 3 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 22 inches; fine sandy loam
H3--22 to 32 inches; sandy loam
H4--32 to 48 inches; sandy loam
H5--48 to 60 inches; sandy loam

152C--Milaca Fine Sandy Loam, 8 To 15 Percent Slopes

Component Description

Milaca and similar soils
Extent: 85 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 15 inches; fine sandy loam
H3--15 to 20 inches; sandy loam
H4--20 to 45 inches; sandy loam
H5--45 to 60 inches; sandy loam

152E--Milaca Fine Sandy Loam, 15 To 25 Percent Slopes

Component Description

Milaca and similar soils
Extent: 90 percent of the unit
Slope range: 15 to 25 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; fine sandy loam
H2--4 to 10 inches; fine sandy loam
H3--10 to 22 inches; sandy loam
H4--22 to 42 inches; sandy loam
H5--42 to 60 inches; sandy loam

164B--Mora Fine Sandy Loam, 1 To 4 Percent Slopes

Component Description

Mora and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 15 inches; fine sandy loam
H3--15 to 28 inches; sandy loam
H4--28 to 42 inches; sandy loam
H5--42 to 60 inches; sandy loam

166--Ronneby Loam

Component Description

Ronneby and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 22 inches; sandy loam
H3--22 to 35 inches; sandy loam
H4--35 to 45 inches; sandy loam
H5--45 to 60 inches;

167B--Baudette Silt Loam, 1 To 5 Percent Slopes

Component Description

Baudette and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 5 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 4 inches; silt loam

H2--4 to 13 inches; silt loam
H3--13 to 35 inches; silt loam
H4--35 to 60 inches; silt loam

186--Nemadji Loamy Fine Sand

Component Description

Nemadji and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 11 inches; loamy fine sand
H2--11 to 34 inches; fine sand
H3--34 to 60 inches; fine sand

188B--Omega Loamy Fine Sand, 2 To 6 Percent Slopes

Component Description

Omega and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 11 inches; loamy fine sand
H2--11 to 60 inches; fine sand

188C--Omega Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Omega and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 16 inches; loamy fine sand
H2--16 to 60 inches; fine sand

188E--Omega Loamy Sand, 12 To 25 Percent Slopes

Component Description

Omega and similar soils
Extent: 85 percent of the unit

Slope range: 12 to 25 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 5 inches; loamy sand
H2--5 to 60 inches; fine sand

202--Meehan Loamy Sand

Component Description

Meehan and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 7 inches; loamy sand
H2--7 to 28 inches; sand
H3--28 to 60 inches; sand

204B--Branstad Loam, 2 To 6 Percent Slopes

Component Description

Branstad and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 2 inches; loam
H2--2 to 17 inches; fine sandy loam
H3--17 to 36 inches; loam
H4--36 to 43 inches; loam
H5--43 to 60 inches; loam

204C--Cushing Loam, 6 To 12 Percent Slopes

Component Description

Cushing and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 25 inches; loam
H3--25 to 44 inches; loam
H4--44 to 60 inches; loam

204E--Cushing Loam, 12 To 25 Percent Slopes

Component Description

Cushing and similar soils
Extent: 85 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 5 inches; loam
H2--5 to 15 inches; loam
H3--15 to 29 inches; loam
H4--29 to 60 inches; loam

218--Watab Fine Sand

Component Description

Watab and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 7 inches; fine sand
H2--7 to 28 inches; loamy fine sand
H3--28 to 36 inches; fine sand
H4--36 to 54 inches; sandy loam
H5--54 to 60 inches; sandy loam

240B--Warba Very Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Warba and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 14 inches; very fine sandy loam
H2--14 to 46 inches; clay loam
H3--46 to 60 inches; loam

240C--Warba Very Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Warba and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 11 inches; very fine sandy loam
H2--11 to 42 inches; clay loam
H3--42 to 60 inches; loam

243--Stuntz Very Fine Sandy Loam

Component Description

Stuntz and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; very fine sandy loam
H2--7 to 37 inches; clay loam
H3--37 to 60 inches; loam

266--Freer Silt Loam

Component Description

Freer and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 6 inches; silt loam
H2--6 to 21 inches; silt loam
H3--21 to 27 inches; loam
H4--27 to 35 inches; loam

H5--35 to 47 inches; sandy loam
H6--47 to 60 inches; sandy loam

268B--Cromwell Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Cromwell and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 23 inches; fine sandy loam
H2--23 to 60 inches; gravelly sand

268C--Cromwell Sandy Loam, 6 To 12 Percent Slopes

Component Description

Cromwell and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 20 inches; sandy loam
H2--20 to 60 inches; gravelly sand

268E--Cromwell Fine Sandy Loam, 12 To 25 Percent Slopes

Component Description

Cromwell and similar soils
Extent: 85 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.2 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 15 inches; fine sandy loam
H2--15 to 60 inches; gravelly sand

268F--Cromwell Fine Sandy Loam, 25 To 40 Percent Slopes

Component Description

Cromwell and similar soils
Extent: 85 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 18 inches; fine sandy loam
H2--18 to 60 inches; gravelly sand

292--Alstad Loam

Component Description

Alstad and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 14 inches; loam
H3--14 to 22 inches; loam
H4--22 to 52 inches; loam
H5--52 to 60 inches; loam

302B--Rosholt Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Rosholt and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; fine sandy loam
H2--9 to 15 inches; fine sandy loam
H3--15 to 22 inches; sandy loam
H4--22 to 30 inches; gravelly loamy sand
H5--30 to 60 inches;

302C--Rosholt Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Rosholt and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 2 inches; fine sandy loam
H2--2 to 14 inches; fine sandy loam
H3--14 to 26 inches; sandy loam
H4--26 to 31 inches; gravelly loamy sand

H5--31 to 60 inches;

346--Talmoon Fine Sandy Loam

Component Description

Talmoon and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 17 inches; loam
H3--17 to 31 inches; clay loam
H4--31 to 60 inches; loam

428--Hassman Muck

Component Description

Hassman and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May November
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet September
Ponding is shallowest (depth, months):
0.5 foot January March June November
December
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 29.9 percent
Typical profile:
H1--0 to 4 inches; muck
H2--4 to 8 inches; silty clay loam
H3--8 to 45 inches; silty clay
H4--45 to 60 inches; silty clay loam

454B--Mahtomedi Loamy Coarse Sand, 2 To 6 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; loamy coarse sand
H2--3 to 6 inches; loamy coarse sand
H3--6 to 28 inches; gravelly sand
H4--28 to 60 inches; gravelly sand

454C--Mahtomedi Loamy Coarse Sand, 6 To 12 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; loamy coarse sand
H2--4 to 17 inches; gravelly coarse sand
H3--17 to 38 inches; gravelly sand
H4--38 to 60 inches; gravelly sand

454E--Mahtomedi Loamy Coarse Sand, 12 To 25 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 90 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
H1--0 to 1 inches; loamy coarse sand
H2--1 to 14 inches; loamy coarse sand
H3--14 to 25 inches; gravelly sand
H4--25 to 60 inches; gravelly sand

454F--Mahtomedi Gravelly Loamy Sand, 25 To 40 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 90 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Gravelly loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
H1--0 to 2 inches; gravelly loamy sand
H2--2 to 15 inches; loamy coarse sand
H3--15 to 30 inches; gravelly sand
H4--30 to 60 inches; gravelly sand

458B--Menahga Loamy Sand, 1 To 6 Percent Slopes

Component Description

Menahga and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 14 inches; loamy sand
H2--14 to 25 inches; sand
H3--25 to 60 inches; sand

458C--Menahga Loamy Sand, 6 To 12 Percent Slopes

Component Description

Menahga and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 4 inches; loamy sand
H2--4 to 23 inches; sand
H3--23 to 60 inches; sand

458E--Menahga Loamy Sand, 12 To 25 Percent Slopes

Component Description

Menahga and similar soils
Extent: 90 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 10 inches; loamy sand
H2--10 to 25 inches; sand
H3--25 to 60 inches; sand

464B--Brennyville Silt Loam, 2 To 5 Percent Slopes

Component Description

Brennyville and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 5 inches; silt loam
H2--5 to 18 inches; silt loam
H3--18 to 24 inches; silt loam

H4--24 to 32 inches; loam
H5--32 to 38 inches; sandy loam
H6--38 to 60 inches; sandy loam

469B--Hillcity Silt Loam, 1 To 6 Percent Slopes

Component Description

Hillcity and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 6 inches; silt loam
H2--6 to 20 inches; silt loam
H3--20 to 43 inches; silt loam
H4--43 to 60 inches; loam

502--Dusler Silt Loam

Component Description

Dusler and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 5 inches; silt loam
H2--5 to 21 inches; fine sandy loam
H3--21 to 50 inches; clay loam
H4--50 to 60 inches; loam

504B--Duluth Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Duluth and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March June July
August September October
November December
Ponding: None

Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 11 inches; fine sandy loam
H2--11 to 41 inches; clay loam
H3--41 to 60 inches; loam

504C--Duluth Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Duluth and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 12 inches; fine sandy loam
H2--12 to 49 inches; clay loam
H3--49 to 60 inches; loam

504E--Duluth Fine Sandy Loam, 12 To 25 Percent Slopes

Component Description

Duluth and similar soils
Extent: 85 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 14 inches; fine sandy loam
H2--14 to 37 inches; clay loam
H3--37 to 60 inches; loam

531--Beseman Muck

Component Description

Beseman and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March May June
July August September October
November December
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet April
Ponding is shallowest (depth, months):
0.5 foot January February March April
August September October
December
Ponding is deepest (depth, months):
2.0 feet May June
Available water capacity to a depth of 60 inches: 27.0 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 14 inches; muck

H2--14 to 40 inches; muck
H3--40 to 60 inches; silty clay loam

532--Sago Muck

Component Description

Sago and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March June July October November
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 11 inches; muck
H2--11 to 60 inches; stratified fine sand to silt loam

533--Loxley Peat

Component Description

Loxley and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March June July October November
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 24.3 inches
Content of organic matter in the upper 10 inches: 80.0 percent
Typical profile:
H1--0 to 3 inches; peat
H2--3 to 60 inches; muck

540--Seelyeville Muck

Component Description

Seelyeville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
October November
Wet soil moisture status is lowest (depth, months):
0.5 foot January February August
September December
Ponding is shallowest (depth, months):

0.5 foot January February March July
August September October
December
Ponding is deepest (depth, months):
1.0 foot April May June November
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 9 inches; muck
H2--9 to 60 inches; muck

541--Rifle Peat

Component Description

Rifle and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September
Ponding is shallowest (depth, months):
0.5 foot March June July October November
December
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 32.8 inches
Content of organic matter in the upper 10 inches: 87.0 percent
Typical profile:
H1--0 to 10 inches; peat
H2--10 to 60 inches; mucky peat

543--Markey Muck

Component Description

Markey and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March June July October November
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 15.5 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 35 inches; muck
H2--35 to 60 inches; sand

544--Cathro Muck

Component Description

Cathro and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March June July October November
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 21.0 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 20 inches; muck
H2--20 to 38 inches; muck
H3--38 to 60 inches; loam

546--Lupton Muck

Component Description

Lupton and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September December
Ponding: None
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 80.0 percent
Typical profile:
H1--0 to 13 inches; muck
H2--13 to 60 inches; muck

549--Greenwood Peat

Component Description

Greenwood and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July August
November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February
Ponding: None
Available water capacity to a depth of 60 inches: 31.3 inches
Content of organic matter in the upper 10 inches: 65.0 percent
Typical profile:
H1--0 to 14 inches; peat
H2--14 to 60 inches; mucky peat

563--Northwood Muck

Component Description

Northwood and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None

Wet soil moisture status is highest (depth, months):
At the surface March April May June July
November
Wet soil moisture status is lowest (depth, months):
0.5 foot January February August
September October December
Ponding is shallowest (depth, months):
0.5 foot January February March June July
October November December
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 62.2 percent
Typical profile:
H1--0 to 9 inches; muck
H2--9 to 13 inches; loamy sand
H3--13 to 35 inches; coarse sand
H4--35 to 60 inches; loam

564--Friendship Loamy Sand

Component Description

Friendship and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet May November
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 6 inches; loamy sand
H3--6 to 39 inches; sand
H4--39 to 60 inches; sand

607--Pengilly Silt Loam

Component Description

Pengilly and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March November December
Flooding is most likely (frequency, months):
Frequent April May June July August
September October
Wet soil moisture status is highest (depth, months):
0.5 foot April May June November
Wet soil moisture status is lowest (depth, months):
1.5 feet January February August
September
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 4 inches; silt loam
H2--4 to 60 inches; stratified loamy very fine sand to silt loam

615--Cowhorn Loamy Very Fine Sand

Component Description

Cowhorn and similar soils

Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy very fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
September
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 7 inches; loamy very fine sand
H2--7 to 39 inches; loamy very fine sand
H3--39 to 60 inches; very fine sand

617B--Goodland Silt Loam, 1 To 10 Percent Slopes

Component Description

Goodland and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 10 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 12 inches; silt loam
H2--12 to 24 inches; sandy loam
H3--24 to 33 inches; loamy sand
H4--33 to 60 inches; coarse sand

618B--Itasca Silt Loam, 1 To 6 Percent Slopes

Component Description

Itasca and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 21 inches; silt loam
H3--21 to 28 inches; sandy loam
H4--28 to 60 inches; sandy loam

621--Morph Very Fine Sandy Loam

Component Description

Morph and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

0.5 foot April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 13 inches; very fine sandy loam
H2--13 to 33 inches; fine sandy loam
H3--33 to 60 inches; stratified loamy sand to silty clay loam

625--Sandwick Loamy Sand

Component Description

Sandwick and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 6 inches; loamy sand
H2--6 to 34 inches; sand
H3--34 to 55 inches; loam
H4--55 to 60 inches; loam

627--Tawas Muck

Component Description

Tawas and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September
Ponding is shallowest (depth, months):
0.5 foot March June July October November
December
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 13.5 inches
Content of organic matter in the upper 10 inches: 50.0 percent
Typical profile:
H1--0 to 13 inches; muck
H2--13 to 31 inches; muck
H3--31 to 60 inches; coarse sand

628--Talmoon Muck, Depressional

Component Description

Talmoon and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June November
Wet soil moisture status is lowest (depth, months):
1.5 feet September
Ponding is shallowest (depth, months):
0.5 foot March June July October November
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 13.4 percent
Typical profile:
H1--0 to 4 inches; muck
H2--4 to 20 inches; fine sandy loam
H3--20 to 42 inches; loam
H4--42 to 60 inches; loam

629B--Wawina Loamy Very Fine Sand, 1 To 10 Percent Slopes

Component Description

Wawina and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 10 percent
Surface layer texture: Loamy very fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 23 inches; loamy very fine sand
H2--23 to 60 inches; very fine sand

672--Willosippi Loam

Component Description

Willosippi and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 12 inches; fine sandy loam
H3--12 to 42 inches; stratified silty clay loam to loamy sand
H4--42 to 60 inches; stratified silty clay loam to loamy sand

685--Oesterle Fine Sandy Loam

Component Description

Oesterle and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet April May
Wet soil moisture status is lowest (depth, months):

More than 6.6 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 21 inches; sandy loam
H3--21 to 34 inches; loamy coarse sand, gravelly sand
H4--34 to 60 inches;

732B--Bushville Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Bushville and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 11 inches; loamy fine sand
H2--11 to 26 inches; loamy sand
H3--26 to 31 inches; sandy loam
H4--31 to 50 inches; sandy loam
H5--50 to 60 inches; sandy loam

734--Cormant Loamy Fine Sand, Stratified Substratum

Component Description

Cormant and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loamy fine sand
H2--8 to 60 inches; stratified sand to silty clay loam

736--Ronneby-Mora Complex

Component Description

Ronneby and similar soils
Extent: 50 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet April May
Wet soil moisture status is lowest (depth, months):

More than 6.6 feet January February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 5 inches; fine sandy loam
H2--5 to 28 inches; sandy loam
H3--28 to 37 inches; sandy loam
H4--37 to 46 inches; sandy loam
H5--46 to 60 inches;

Mora and similar soils
Extent: 40 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 7 inches; fine sandy loam
H3--7 to 25 inches; sandy loam
H4--25 to 43 inches; sandy loam
H5--43 to 60 inches; sandy loam

738B--Milaca-Millward Complex, 2 To 8 Percent Slopes

Component Description

Milaca and similar soils
Extent: 50 percent of the unit
Slope range: 3 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; fine sandy loam
H2--4 to 17 inches; fine sandy loam
H3--17 to 22 inches; sandy loam
H4--22 to 33 inches; sandy loam
H5--33 to 60 inches; sandy loam

Millward and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 4 inches; fine sandy loam
H2--4 to 21 inches; fine sandy loam
H3--21 to 34 inches; sand

H4--34 to 46 inches; sandy loam
H5--46 to 60 inches; sandy loam

738C--Milaca-Millward Complex, 8 To 15 Percent Slopes

Component Description

Milaca and similar soils
Extent: 50 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; sandy loam
H2--3 to 14 inches; fine sandy loam
H3--14 to 21 inches; sandy loam
H4--21 to 32 inches; sandy loam
H5--32 to 60 inches; sandy loam

Millward and similar soils
Extent: 35 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; fine sandy loam
H2--8 to 23 inches; fine sandy loam
H3--23 to 34 inches; sand
H4--34 to 43 inches; sandy loam
H5--43 to 60 inches; sandy loam

759--Waukenabo Fine Sandy Loam

Component Description

Waukenabo and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 6 inches; fine sandy loam
H2--6 to 15 inches; loamy sand
H3--15 to 28 inches; sandy loam
H4--28 to 30 inches; very fine sandy loam
H5--30 to 60 inches; stratified fine sand to clay loam

795--Redby Loamy Fine Sand, Stratified Substratum

Component Description

Redby and similar soils
Extent: 90 percent of the unit

Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 7 inches; loamy fine sand
H2--7 to 25 inches; sand
H3--25 to 42 inches; fine sand
H4--42 to 60 inches; stratified fine sand to fine sandy loam

797--Mooselake And Lupton Mucky Peats

Component Description

Lupton and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Mucky peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September December
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 24.7 inches
Content of organic matter in the upper 10 inches: 64.0 percent
Typical profile:
H1--0 to 8 inches; mucky peat
H2--8 to 60 inches; muck

Mooselake and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Mucky peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June October
November
Wet soil moisture status is lowest (depth, months):
0.5 foot January February July August
September December
Ponding is shallowest (depth, months):
0.5 foot March June October November
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 26.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 3 inches; mucky peat
H2--3 to 60 inches; mucky peat

798--Sago And Roscommon Soils

Component Description

Roscommon and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Mucky loamy sand
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March June July October November
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 5.7 percent
Typical profile:
H1--0 to 6 inches; mucky loamy sand
H2--6 to 60 inches; sand

Sago and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March June July October November
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 13 inches; muck
H2--13 to 60 inches; stratified fine sand to silt loam

799--Seelyeville-Bowstring Association

Component Description

Bowstring and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February August September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding: None
Available water capacity to a depth of 60 inches: 22.6 inches
Content of organic matter in the upper 10 inches: 65.0 percent
Typical profile:
H1--0 to 38 inches; muck
H2--38 to 43 inches; stratified sand to fine sandy loam
H3--43 to 60 inches; muck

Seelyeville and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):

January February August September December
        Flooding is most likely (frequency, months):
Frequent   April May June
        Wet soil moisture status is highest (depth, months):
At the surface   January February March April May
  June October November December
        Wet soil moisture status is lowest (depth, months):
0.5 foot   July August September
        Ponding: None
        Available water capacity to a depth of 60 inches: 23.9 inches
        Content of organic matter in the upper 10 inches: 62.0 percent
        Typical profile:
H1--0 to 28 inches; muck
H2--28 to 60 inches; muck

869--Lobo And Waskish Peats

  Component Description

     Lobo and similar soils
        Extent: 70 percent of the unit
        Slope range: 0 to 1 percent
        Surface layer texture: Peat
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Very poorly drained
        Flooding: None
        Wet soil moisture status is highest (depth, months):
0.5 foot   April May June July November
  December
        Wet soil moisture status is lowest (depth, months):
2.0 feet   February
        Ponding: None
        Available water capacity to a depth of 60 inches: 34.3 inches
        Content of organic matter in the upper 10 inches: 62.0 percent
        Typical profile:
H1--0 to 44 inches; peat
H2--44 to 60 inches; mucky peat

     Waskish and similar soils
        Extent: 20 percent of the unit
        Slope range: 0 to 1 percent
        Surface layer texture: Peat
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Very poorly drained
        Flooding: None
        Wet soil moisture status is highest (depth, months):
0.5 foot   May June November
        Wet soil moisture status is lowest (depth, months):
2.0 feet   January February September
        Ponding: None
        Available water capacity to a depth of 60 inches: 35.9 inches
        Content of organic matter in the upper 10 inches: 94.5 percent
        Typical profile:
H1--0 to 60 inches; peat

870B--Itasca-Goodland Complex, 2 To 6 Percent Slopes

  Component Description

     Itasca and similar soils
        Extent: 55 percent of the unit
        Slope range: 2 to 6 percent
        Surface layer texture: Silt loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Flooding: None
        Depth to wet soil moisture status: More than 6.6 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 10.1 inches
        Content of organic matter in the upper 10 inches: 1.8 percent
        Typical profile:
H1--0 to 12 inches; silt loam
H2--12 to 16 inches; silt loam
H3--16 to 37 inches; sandy loam
H4--37 to 60 inches; sandy loam

Goodland and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 30 inches; sandy loam
H3--30 to 41 inches; loamy sand
H4--41 to 60 inches; coarse sand

870C--Itasca-Goodland Complex, 6 To 12 Percent Slopes

Component Description

Itasca and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 4 inches; silt loam
H2--4 to 14 inches; silt loam
H3--14 to 49 inches; sandy loam
H4--49 to 60 inches; sandy loam

Goodland and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 12 inches; silt loam
H2--12 to 25 inches; sandy loam
H3--25 to 33 inches; loamy sand
H4--33 to 60 inches; coarse sand

870E--Itasca-Goodland Complex, 12 To 25 Percent Slopes

Component Description

Itasca and similar soils
Extent: 50 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 2 inches; silt loam
H2--2 to 14 inches; silt loam

H3--14 to 53 inches; sandy loam
H4--53 to 60 inches; sandy loam

Goodland and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 23 inches; sandy loam
H3--23 to 34 inches; loamy sand
H4--34 to 60 inches; coarse sand

872--Pengilly-Winterfield Association

Component Description

Pengilly and similar soils
Extent: 60 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March December
Flooding is most likely (frequency, months):
Frequent April May June July
Wet soil moisture status is highest (depth, months):
0.5 foot April May June November
Wet soil moisture status is lowest (depth, months):
1.5 feet February August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 4 inches; silt loam
H2--4 to 60 inches; stratified loamy very fine sand to silt loam

Winterfield and similar soils
Extent: 25 percent of the unit
Slope range: 0 to 4 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding does not occur (months):
June July August September October
Flooding is most likely (frequency, months):
Frequent January February March April May
November December
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
3.0 feet January February August
September
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 6 inches; loamy fine sand
H2--6 to 41 inches; loamy fine sand
H3--41 to 60 inches; sand

928C--Cushing-Mahtomedi Complex, 2 To 10 Percent Slopes

Component Description

Cushing and similar soils
Extent: 50 percent of the unit

Slope range: 2 to 10 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 16 inches; very fine sandy loam
H2--16 to 19 inches; loam
H3--19 to 44 inches; loam
H4--44 to 60 inches; loam

Mahtomedi and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 10 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; loamy sand
H2--4 to 15 inches; coarse sand
H3--15 to 26 inches; gravelly coarse sand
H4--26 to 60 inches; gravelly sand

928D--Cushing-Mahtomedi Complex, 10 To 25 Percent Slopes

Component Description

Cushing and similar soils
Extent: 45 percent of the unit
Slope range: 10 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 17 inches; loam
H3--17 to 30 inches; loam
H4--30 to 60 inches; loam

Mahtomedi and similar soils
Extent: 40 percent of the unit
Slope range: 10 to 25 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; loamy coarse sand
H2--3 to 13 inches; coarse sand
H3--13 to 25 inches; gravelly coarse sand
H4--25 to 60 inches; gravelly sand

928F--Cushing-Mahtomedi Complex, 25 To 40 Percent Slopes

Component Description

Cushing and similar soils
Extent: 45 percent of the unit
Slope range: 25 to 35 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 4 inches; fine sandy loam
H2--4 to 14 inches; loam
H3--14 to 35 inches; loam
H4--35 to 60 inches; loam

Mahtomedi and similar soils
Extent: 40 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; loamy sand
H2--4 to 20 inches; coarse sand
H3--20 to 35 inches; gravelly coarse sand
H4--35 to 60 inches; gravelly sand

980--Blackhoof And Mahtowa Soils

Component Description

Blackhoof and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
October November
Wet soil moisture status is lowest (depth, months):
0.5 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March July August October
November December
Ponding is deepest (depth, months):
1.0 foot April May June
Available water capacity to a depth of 60 inches: 14.0 inches
Content of organic matter in the upper 10 inches: 37.5 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 14 inches; clay loam
H3--14 to 60 inches; loam

Mahtowa and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
October November
Wet soil moisture status is lowest (depth, months):
0.5 foot January February August

September December
Ponding is shallowest (depth, months):
0.5 foot March July August October
November December
Ponding is deepest (depth, months):
1.0 foot April May June
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 12.5 percent
Typical profile:
H1--0 to 3 inches; muck
H2--3 to 11 inches; loam
H3--11 to 60 inches; loam

990--Twig And Giese Soils

Component Description

Giese and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
October November
Wet soil moisture status is lowest (depth, months):
0.5 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March July August October
November December
Ponding is deepest (depth, months):
1.0 foot April May June
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 18.3 percent
Typical profile:
H1--0 to 4 inches; muck
H2--4 to 10 inches; loam
H3--10 to 21 inches; fine sandy loam
H4--21 to 43 inches; fine sandy loam
H5--43 to 70 inches; fine sandy loam
H6--70 to 80 inches; fine sandy loam

Twig and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
October November
Wet soil moisture status is lowest (depth, months):
0.5 foot January February August
September December
Ponding is shallowest (depth, months):
0.5 foot March July August October
November December
Ponding is deepest (depth, months):
1.0 foot April May June
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 37.5 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 16 inches; loam
H3--16 to 44 inches; fine sandy loam
H4--44 to 52 inches; sandy loam
H5--52 to 60 inches; sandy loam

1002--Borosaprists And Fluvaquents Soils, Frequently Flooded

Component Description

Borosaprists and similar soils
Extent: 50 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February August September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June November
Wet soil moisture status is lowest (depth, months):
3.0 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 21.2 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 27 inches; muck
H2--27 to 48 inches; muck
H3--48 to 60 inches; stratified sand to silt loam

Fluvaquents and similar soils
Extent: 40 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June July
Wet soil moisture status is highest (depth, months):
At the surface April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 16 inches; silt loam
H2--16 to 60 inches; stratified loamy sand to silt loam

1030--Pits, Gravel-Udipsamments Complex

Component Description

Pits
Extent: 50 percent of the unit
Slope range: 1 to 50 percent

Udipsamments and similar soils
Extent: 45 percent of the unit
Slope range: 1 to 50 percent
Surface layer texture: Sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Typical profile:
H1--0 to 14 inches; sand
H2--14 to 60 inches; sand
H3--60 to 80 inches; coarse sand

1031--Histosols, Ponded

Component Description

Histosols and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Mucky peat

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June November
December
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July
Ponding is shallowest (depth, months):
0.5 foot January March August October
December
Ponding is deepest (depth, months):
2.0 feet May June
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 59.5 percent
Typical profile:
H1--0 to 40 inches; mucky peat
H2--40 to 60 inches; fine sand

1072--Udorthents, Shallow (sanitary Landfill)

Component Description

Udorthents
Extent: 95 percent of the unit
Slope range: 0 to 30 percent
Surface layer texture: Sandy loam
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 20 inches; sandy loam
H2--20 to 80 inches; variable

1115--Newson Loamy Sand

Component Description

Newson and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot February August September
Ponding is shallowest (depth, months):
0.5 foot April July October November
December
Ponding is deepest (depth, months):
1.0 foot May June
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 4.6 percent
Typical profile:
H1--0 to 6 inches; loamy sand
H2--6 to 23 inches; sand
H3--23 to 60 inches; sand

1150--Jevne Fine Sandy Loam

Component Description

Jevne and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 4.1 percent
Typical profile:
H1--0 to 6 inches; fine sandy loam
H2--6 to 19 inches; loam
H3--19 to 43 inches; loam
H4--43 to 60 inches; stratified clay loam to loamy sand

1154--Sax Muck

Component Description

Sax and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May November
December
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet June
Ponding is shallowest (depth, months):
0.5 foot April July October November
December
Ponding is deepest (depth, months):
1.0 foot May June
Available water capacity to a depth of 60 inches: 13.9 inches
Content of organic matter in the upper 10 inches: 47.5 percent
Typical profile:
H1--0 to 12 inches; muck
H2--12 to 15 inches; silt loam
H3--15 to 39 inches; silt loam
H4--39 to 60 inches; silty clay loam

1353B--Cutaway Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Cutaway and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 11 inches; loamy fine sand
H2--11 to 26 inches; loamy sand
H3--26 to 49 inches; loam
H4--49 to 60 inches; loam

1354A--Aftad Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Aftad and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent

Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 25 inches; loamy fine sand
H3--25 to 44 inches; very fine sandy loam
H4--44 to 60 inches; stratified sandy loam to silt loam

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit
Geomorphic description:
Depression

1372--Wealthwood Loamy Fine Sand

Component Description

Wealthwood and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
December
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 4 inches; loamy fine sand
H2--4 to 28 inches; loamy fine sand
H3--28 to 42 inches; stratified silty clay loam to sand
H4--42 to 60 inches; stratified silt loam to sand

1375B--Alban Fine Sandy Loam, 3 To 8 Percent Slopes

Component Description

Alban and similar soils
Extent: 85 percent of the unit
Slope range: 3 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 5 inches; fine sandy loam
H2--5 to 23 inches; fine sandy loam
H3--23 to 29 inches; fine sandy loam
H4--29 to 60 inches; stratified silt to fine sand

1878--Hamre Muck

Component Description

Hamre and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June October
November December
Wet soil moisture status is lowest (depth, months):
0.5 foot January February July August
September
Ponding is shallowest (depth, months):
0.5 foot March June July October December
Ponding is deepest (depth, months):
1.0 foot April May November
Available water capacity to a depth of 60 inches: 13.1 inches
Content of organic matter in the upper 10 inches: 90.0 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 17 inches; loam
H3--17 to 60 inches; loam

1982--Baudette-Spooner Complex

Component Description

Baudette and similar soils
Extent: 55 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 4 inches; silt loam
H2--4 to 9 inches; silt loam
H3--9 to 21 inches; silt loam
H4--21 to 60 inches; silt loam

Spooner and similar soils
Extent: 35 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 22 inches; silt loam
H3--22 to 27 inches; silt loam
H4--27 to 60 inches; silt loam

1983--Cathro Muck, Stratified Substratum

Component Description

Cathro and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June November
Wet soil moisture status is lowest (depth, months):
1.0 foot January February August
September
Ponding is shallowest (depth, months):
0.5 foot March June July October November
December
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 16 inches; muck
H2--16 to 35 inches; muck
H3--35 to 60 inches; stratified silty clay loam to sand

1984--Leafriver Muck

Component Description

Leafriver and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
November
Wet soil moisture status is lowest (depth, months):
0.5 foot January February August
September October December
Ponding is shallowest (depth, months):
0.5 foot March June July October November
December
Ponding is deepest (depth, months):
1.0 foot April May
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 13 inches; muck
H2--13 to 17 inches; sand
H3--17 to 60 inches; sand

CW--Census Water

Component Description

Census water
Extent: 100 percent of the unit

W--Water

Component Description

Water
Extent: 100 percent of the unit

Af ALLUVIAL LAND, MIXED, FREQUENTLY FLOODED

No description available.

AnA ANOKA LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES

Anoka soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 18 inches thick. This soil is very deep and well drained. The surface layer has a low content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3s. This soil is not hydric.

AnB ANOKA LOAMY FINE SAND, 2 TO 6 PERCENT SLOPES

Anoka soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 18 inches thick. This soil is very deep and well drained. The surface layer has a low content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

AnC ANOKA LOAMY FINE SAND, 6 TO 12 PERCENT SLOPES

Anoka soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 18 inches thick. This soil is very deep and well drained. The surface layer has a low content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

Ba BECKER VERY FINE SANDY LOAM

Becker soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is very fine sandy loam about 9 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The land capability classification is 2s. This soil is not hydric.

Bm BLOMFORD LOAMY FINE SAND

Blomford soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 9 inches thick. This soil is very deep and poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 3w. This soil is hydric.

BtB BRAHAM LOAMY FINE SAND, 2 TO 6 PERCENT SLOPES

Braham soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3s. This soil is not hydric.

BtC BRAHAM LOAMY FINE SAND, 6 TO 18 PERCENT SLOPES

Braham soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 8 inches thick. This soil is very deep and well drained. The surface layer has a

moderately low content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

Bx BRICKTON SILT LOAM

Brickton soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is silt loam about 7 inches thick. This soil is very deep and poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 40 percent calcium carbonate. The land capability classification is 2w. This soil is hydric.

Cb CATHRO MUCK

Cathro soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 9 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is slow. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

CkB CHETEK SANDY LOAM, 2 TO 6 PERCENT SLOPES

Chetek soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

CkC CHETEK SANDY LOAM, 6 TO 12 PERCENT SLOPES

Chetek soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

Cu CUT AND FILL LAND

No description available.

CW CENSUS WATER

No description available.

DlA DALBO SILT LOAM, 1 TO 5 PERCENT SLOPES

Dalbo soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is silt loam about 6 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

DnA DICKMAN SANDY LOAM, 0 TO 2 PERCENT SLOPES

Dickman soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is sandy loam about 12 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 3s. This soil is not hydric.

DnB DICKMAN SANDY LOAM, 2 TO 6 PERCENT SLOPES

Dickman soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is sandy loam

about 12 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

Dp DUELM LOAMY COARSE SAND

Duelm soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy coarse sand about 11 inches thick. This soil is very deep and moderately well drained. The surface layer has a high content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 4s. This soil is not hydric.

Du DUNDAS LOAM

Dundas soil makes up 100 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loam about 10 inches thick. This soil is very deep and poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 2w. This soil is hydric.

EmC EMMERT GRAVELLY COARSE SANDY LOAM, 6 TO 12 PERCENT SLOPES

Emmert soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is gravelly coarse sandy loam about 4 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

EmD EMMERT GRAVELLY COARSE SANDY LOAM, 12 TO 25 PERCENT SLOPES

Emmert soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is gravelly coarse sandy loam about 4 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

EpC EMMERT COMPLEX, 4 TO 12 PERCENT SLOPES

Emmert soil makes up 70 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is gravelly coarse sandy loam about 4 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

Kingsley soil makes up 30 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

EpD EMMERT COMPLEX, 12 TO 25 PERCENT SLOPES

Emmert soil makes up 70 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is gravelly coarse sandy loam about 4 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

Kingsley soil makes up 30 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy

loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

Gc GLENCOE LOAM

Glencoe soil makes up 100 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loam about 21 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 3w. This soil is hydric.

Gp GRAVEL PIT

No description available.

GrA GROWTON FINE SANDY LOAM, 1 TO 4 PERCENT SLOPES

Growton soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 9 inches thick. This soil is very deep and moderately well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 48 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

HdB HAYDEN FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES

Hayden soil makes up 100 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 6 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

HdC2 HAYDEN FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES, ERODED

Hayden, Eroded, soil makes up 100 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 6 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

HdD HAYDEN FINE SANDY LOAM, 12 TO 24 PERCENT SLOPES

Hayden soil makes up 100 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 6 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

HeB HEYDER FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES

Heyder soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 22 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

HeC2 HEYDER FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES, ERODED

Heyder, Eroded, soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine

sandy loam about 22 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

HeD HEYDER FINE SANDY LOAM, 12 TO 18 PERCENT SLOPES

Heyder soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 22 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

HeE HEYDER FINE SANDY LOAM, 18 TO 30 PERCENT SLOPES

Heyder soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 22 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

HlC HEYDER COMPLEX, 4 TO 12 PERCENT SLOPES

Heyder soil makes up 70 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 22 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

Emmert soil makes up 15 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is gravelly coarse sandy loam about 4 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

Hayden soil makes up 15 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 6 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

HlD HEYDER COMPLEX, 12 TO 25 PERCENT SLOPES

Heyder soil makes up 65 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 22 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

Emmert soil makes up 20 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is gravelly coarse sandy loam about 4 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

Hayden soil makes up 15 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 6 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

HuA HUBBARD COARSE SAND, 0 TO 2 PERCENT SLOPES

Hubbard soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is coarse sand about 20 inches thick. This soil is very deep and excessively drained. The surface layer has a content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 4s. This soil is not hydric.

HuB HUBBARD COARSE SAND, 2 TO 6 PERCENT SLOPES

Hubbard soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is coarse sand about 20 inches thick. This soil is very deep and excessively drained. The surface layer has a content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 4s. This soil is not hydric.

HuC HUBBARD COARSE SAND, 6 TO 12 PERCENT SLOPES

Hubbard soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is coarse sand about 20 inches thick. This soil is very deep and excessively drained. The surface layer has a content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 6s. This soil is not hydric.

Is ISAN SANDY LOAM

Isan soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is sandy loam about 11 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 5w. This soil is hydric.

Iw ISANTI FINE SANDY LOAM

Isanti soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 10 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

KmB KINGSLEY FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES

Kingsley soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

KmC2 KINGSLEY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES, ERODED

Kingsley soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

KmD KINGSLEY FINE SANDY LOAM, 12 TO 18 PERCENT SLOPES

Kingsley soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a

moderate content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 4e. This soil is not hydric.

KmE KINGSLEY FINE SANDY LOAM, 18 TO 30 PERCENT SLOPES

Kingsley soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

Kr KRATKA LOAMY FINE SAND

Kratka soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 12 inches thick. This soil is very deep and very poorly drained. The surface layer has a content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

Lb LAKE BEACHES

No description available.

LgB LANGOLA LOAMY SAND, 0 TO 6 PERCENT SLOPES

Langola soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy sand about 10 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The land capability classification is 3s. This soil is not hydric.

LnA LINO LOAMY FINE SAND, 0 TO 4 PERCENT SLOPES

Lino soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 7 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The land capability classification is 3s. This soil is not hydric.

Lw LOAMY WET LAND

No description available.

Lx LUPTON MUCK

Lupton soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is muck about 9 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The land capability classification is 7w. This soil is hydric.

Ma MARKEY MUCK

Markey soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is muck about 31 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is rapid. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

Mc MARSH

No description available.

Me MEEHAN SAND

Meehan soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is sand about 8 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The land capability classification is 4w. This soil is not hydric.

Mk MILLERVILLE MUCKY PEAT

Millerville soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is mucky peat about 30 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 7w. This soil is hydric.

MoA MORA FINE SANDY LOAM, 1 TO 4 PERCENT SLOPES

Mora soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 8 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

NeA NESSEL FINE SANDY LOAM, 1 TO 4 PERCENT SLOPES

Nessel soil makes up 100 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 9 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 39 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

No NOWEN SANDY LOAM

Nowen soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is sandy loam about 15 inches thick. This soil is very deep and poorly drained. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The land capability classification is 2w. This soil is hydric.

NrD NYMORE LOAMY COARSE SAND, 12 TO 25 PERCENT SLOPES

Nymore soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy coarse sand about 7 inches thick. This soil is very deep and excessively drained. The surface layer has a content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

NyA NYMORE LOAMY SAND, 0 TO 2 PERCENT SLOPES

Nymore soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy sand about 7 inches thick. This soil is very deep and excessively drained. The surface layer has a content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

NyB NYMORE LOAMY SAND, 2 TO 6 PERCENT SLOPES

Nymore soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy sand about 7 inches thick. This soil is very deep and excessively drained. The surface layer has a content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

NyC NYMORE LOAMY SAND, 6 TO 12 PERCENT SLOPES

Nymore soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy sand about 7 inches thick. This soil is very deep and excessively drained. The surface layer has a content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

Rf RIFLE MUCKY PEAT

Rifle soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is mucky peat about 8 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

Rg RIFLE MUCK, WOODY

Rifle, Woody, soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is muck about 8 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 4w. This soil is hydric.

Rh RIFLE SOILS, PONDED

Rifle, Ponded, soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is muck about 8 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 8w. This soil is hydric.

Ru RONDEAU MUCK

Rondeau soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is muck about 44 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 90 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

Ry RONNEBY FINE SANDY LOAM

Ronneby soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sandy loam about 5 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 18 inches. The land capability classification is 2w. This soil is not hydric.

SbB SARTELL FINE SAND, 2 TO 6 PERCENT SLOPES

Sartell soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 9 inches thick. This soil is very deep and excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

SbC SARTELL FINE SAND, 6 TO 12 PERCENT SLOPES

Sartell soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 9 inches thick. This soil is very deep and excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

SbC2 SARTELL FINE SAND, 6 TO 12 PERCENT SLOPES, ERODED

Sartell, Eroded, soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 5 inches thick. This soil is very deep and excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

SbD2 SARTELL FINE SAND, 12 TO 24 PERCENT SLOPES, ERODED

Sartell, Eroded, soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 5 inches thick. This soil is very deep and excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

Se SEELYEVILLE MUCK

Seelyeville soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is muck about 10 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

SoA SODERVILLE FINE SAND, 0 TO 3 PERCENT SLOPES

Soderville soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 9 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The land capability classification is 3s. This soil is not hydric.

Wb WEBSTER LOAM

Webster soil makes up 100 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loam about 14 inches thick. This soil is very deep and poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 2w. This soil is hydric.

ZmA ZIMMERMAN FINE SAND, 0 TO 2 PERCENT SLOPES

Zimmerman soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 10 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

ZmB ZIMMERMAN FINE SAND, 2 TO 6 PERCENT SLOPES

Zimmerman soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 10 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

ZmC ZIMMERMAN FINE SAND, 6 TO 12 PERCENT SLOPES

Zimmerman soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 10 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

ZmD ZIMMERMAN FINE SAND, 12 TO 24 PERCENT SLOPES

Zimmerman soil makes up 100 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 10 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

Becker County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Beltrami County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

7A HUBBARD LOAMY SAND, 0 TO 2 PERCENT SLOPES

Hubbard soil makes up 95 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy sand about 16 inches thick. This soil is very deep and excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 4s. This soil is not hydric.

7B HUBBARD LOAMY SAND, 2 TO 6 PERCENT SLOPES

Hubbard soil makes up 95 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy sand about 14 inches thick. This soil is very deep and excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 4s. This soil is not hydric.

12E EMMERT GRAVELLY COARSE SANDY LOAM, 6 TO 25 PERCENT SLOPES

Emmert soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 5 inches thick. This soil is very deep and excessively drained. The surface layer has a low content of organic matter. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

13 ADOLPH SILT LOAM, 0 TO 2 PERCENT SLOPES

Adolph soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 9 inches thick. This soil is very deep and poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 3w. This soil is hydric.

14 ADOLPH SILT LOAM, DEPRESSIONAL, 0 TO 1 PERCENT SLOPES

Adolph, Depressional, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 5 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

38B WAUKON FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES

Waukon soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

119C POMROY LOAMY FINE SAND, 6 TO 12 PERCENT SLOPES

Pomroy soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loamy fine sand about 6 inches thick. This soil is very deep and well drained. The surface layer has a low content of organic matter. The slowest permeability is impermeable. It has a low

available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

142 NOKAY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES

Nokay soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The land capability classification is 2w. This soil is not hydric.

144B FLAK SANDY LOAM, 3 TO 6 PERCENT SLOPES

Flak soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

144C FLAK SANDY LOAM, 6 TO 12 PERCENT SLOPES

Flak soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is sandy loam about 7 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

147 SPOONER SILT LOAM, 0 TO 2 PERCENT SLOPES

Spooner soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is silt loam about 7 inches thick. This soil is very deep and poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 40 percent calcium carbonate. The land capability classification is 2w. This soil is hydric.

152B MILACA FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES

Milaca soil makes up 90 percent of the map unit. This map unit is in the Typically the surface layer is --- about 6 inches thick. This soil is very deep and moderately well drained. The surface layer has a low content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

152C MILACA FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES

Milaca soil makes up 95 percent of the map unit. This map unit is in the Typically the surface layer is fine sandy loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a low content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

152E MILACA FINE SANDY LOAM, 12 TO 25 PERCENT SLOPES

Milaca soil makes up 95 percent of the map unit. This map unit is in the Typically the surface layer is fine sandy loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a low content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

161 ISANTI FINE SANDY LOAM, DEPRESSIONAL, 0 TO 1 PERCENT SLOPES

Isanti soil makes up 95 percent of the map unit. This map unit is in the Typically the surface layer is fine sandy loam about 11 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6w. This soil is hydric.

162 LINO LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES

Lino soil makes up 95 percent of the map unit. This map unit is in the Typically the surface layer is --- about 6 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3s. This soil is not hydric.

163A BRAINERD SANDY LOAM, 0 TO 3 PERCENT SLOPES

Brainerd soil makes up 90 percent of the map unit. This map unit is in the Typically the surface layer is --- about 8 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2s. This soil is not hydric.

163B BRAINERD SANDY LOAM, 3 TO 5 PERCENT SLOPES

Brainerd soil makes up 90 percent of the map unit. This map unit is in the Typically the surface layer is --- about 8 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

164A MORA LOAM, 0 TO 3 PERCENT SLOPES

Mora soil makes up 90 percent of the map unit. This map unit is in the Typically the surface layer is --- about 4 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 2s. This soil is not hydric.

164B MORA FINE SANDY LOAM, 3 TO 5 PERCENT SLOPES

Mora soil makes up 90 percent of the map unit. This map unit is in the Typically the surface layer is --- about 7 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

165 PARENT LOAM, 0 TO 2 PERCENT SLOPES

Parent soil makes up 90 percent of the map unit. This map unit is in the Typically the surface layer is --- about 7 inches thick. This soil is very deep and poorly drained. The surface layer has a high content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 2w. This soil is hydric.

166 RONNEBY LOAM, 0 TO 2 PERCENT SLOPES

Ronneby soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 18 inches. The land capability classification is 2w. This soil is not hydric.

179A LANGOLA LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES

Langola soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 15 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The land capability classification is 3s. This soil is not hydric.

179B LANGOLA LOAMY FINE SAND, 2 TO 6 PERCENT SLOPES

Langola soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin

and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loamy fine sand about 13 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The land capability classification is 3s. This soil is not hydric.

217 NOKASIPPI LOAMY FINE SAND, DEPRESSIONAL, 0 TO 1 PERCENT SLOPES

Nokasippi, Depressional, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 14 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 4w. This soil is hydric.

218 WATAB LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES

Watab soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and poorly drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The land capability classification is 3w. This soil is hydric.

260 DUELM LOAMY SAND, 0 TO 2 PERCENT SLOPES

Duelm soil makes up 95 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 10 inches thick. This soil is very deep and moderately well drained. The surface layer has a high content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 36 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 4s. This soil is not hydric.

266 FREER SILT LOAM, 0 TO 2 PERCENT SLOPES

Freer soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 18 inches. The land capability classification is 2w. This soil is not hydric.

325 PREBISH FINE SANDY LOAM, DEPRESSIONAL, 0 TO 1 PERCENT SLOPES

Prebish, Depressional, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 16 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

328A SARTELL FINE SAND, 0 TO 2 PERCENT SLOPES

Sartell soil makes up 90 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

328B SARTELL FINE SAND, 2 TO 6 PERCENT SLOPES

Sartell soil makes up 95 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is very deep and excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

328C SARTELL FINE SAND, 6 TO 12 PERCENT SLOPES

Sartell soil makes up 95 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 5 inches thick. This soil is very deep and excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

328E SARTELL FINE SAND, 12 TO 25 PERCENT SLOPES

Sartell soil makes up 95 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is fine sand about 3 inches thick. This soil is very deep and excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

337 WARMAN LOAM, DEPRESSIONAL, 0 TO 1 PERCENT SLOPES

Warman, Depressional, soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 16 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

445B BRAHAM LOAMY FINE SAND, LACUSTRINE SUBSTRATUM, 2 TO 6 PERCENT SLOPES

Braham, Lacustrine substratum, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 9 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3s. This soil is not hydric.

464A BRENNYVILLE SILT LOAM, 1 TO 3 PERCENT SLOPES

Brennyville soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 2s. This soil is not hydric.

464B BRENNYVILLE SILT LOAM, 3 TO 6 PERCENT SLOPES

Brennyville soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

466 OGILVIE SILT LOAM, 0 TO 2 PERCENT SLOPES

Ogilvie soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The land capability classification is 2w. This soil is not hydric.

540 SEELYEVILLE MUCK, 0 TO 1 PERCENT SLOPES

Seelyeville soil makes up 85 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is muck about 13 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

543 MARKEY MUCK, 0 TO 1 PERCENT SLOPES

Markey soil makes up 90 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 21 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is rapid. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

544 CATHRO MUCK, 0 TO 1 PERCENT SLOPES

Cathro soil makes up 85 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 26 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is slow. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

567A VERNDALE SANDY LOAM, 0 TO 2 PERCENT SLOPES

Verndale soil makes up 95 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 11 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 3s. This soil is not hydric.

623A PIERZ SANDY LOAM, 0 TO 2 PERCENT SLOPES

Pierz soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 10 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2s. This soil is not hydric.

676A KOST LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES

Kost soil makes up 90 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 16 inches thick. This soil is very deep and excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

676B KOST LOAMY FINE SAND, 2 TO 6 PERCENT SLOPES

Kost soil makes up 95 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 14 inches thick. This soil is very deep and excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

682B MILACA FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES, VERY STONY

Milaca, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 6 inches thick. This soil is very deep and moderately well drained. The surface layer has a low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 48 inches. The land capability classification is 6s. This soil is not hydric.

717A NOVAK SILT LOAM, 0 TO 2 PERCENT SLOPES

Novak soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is silt loam about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and

is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2s. This soil is not hydric.

717B NOVAK SILT LOAM, 2 TO 6 PERCENT SLOPES

Novak soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

722 BLOMFORD LOAMY SAND, LACUSTRINE SUBSTRATUM, 0 TO 2 PERCENT SLOPES

Blomford, Lacustrine substratum, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 9 inches thick. This soil is very deep and poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 3w. This soil is not hydric.

723 FREER SILT LOAM, 0 TO 2 PERCENT SLOPES, VERY STONY

Freer, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 18 inches. The land capability classification is 6s. This soil is not hydric.

725 KRATKA FINE SANDY LOAM, STRATIFIED SUBSTRATUM, 0 TO 3 PERCENT SLOPES

Kratka, Stratified substratum, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 9 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The land capability classification is 2w. This soil is not hydric.

727B MILACA VERY FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES

Milaca soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 6 inches thick. This soil is very deep and moderately well drained. The surface layer has a low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 48 inches. The land capability classification is 2e. This soil is not hydric.

728B BRENNYVILLE SILT LOAM, 1 TO 6 PERCENT SLOPES, VERY STONY

Brennyville, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6s. This soil is not hydric.

729 WARMAN LOAM, 0 TO 2 PERCENT SLOPES

Warman soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loam about 13 inches thick. This soil is very deep and poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The land capability classification is 3w. This soil is not hydric.

730A SANBURN FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES

Sanburn soil makes up 85 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 6 inches thick. This soil is very deep and somewhat excessively drained.

The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3s. This soil is not hydric.

730B SANBURN FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES

Sanburn soil makes up 85 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 6 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

730C SANBURN FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES

Sanburn soil makes up 85 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 6 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

732A BUSHVILLE FINE SAND, 0 TO 2 PERCENT SLOPES

Bushville soil makes up 85 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 10 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The land capability classification is 3s. This soil is not hydric.

732B BUSHVILLE FINE SAND, 2 TO 6 PERCENT SLOPES

Bushville soil makes up 85 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 6 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The land capability classification is 3s. This soil is not hydric.

754 PREBISH FINE SANDY LOAM, DEPRESSIONAL, 0 TO 1 PERCENT SLOPES, VERY STONY

Prebish, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 16 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 6s. This soil is hydric.

756A DALBO VERY FINE SANDY LOAM, SILTY SUBSTRATUM, 0 TO 2 PERCENT SLOPES

Dalbo, Silty substratum, soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is very fine sandy loam about 12 inches thick. This soil is very deep and moderately well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 45 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 1. This soil is not hydric.

756B DALBO VERY FINE SANDY LOAM, SILTY SUBSTRATUM, 2 TO 6 PERCENT SLOPES

Dalbo, Silty substratum, soil makes up 95 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is very fine sandy loam about 11 inches thick. This soil is very deep and moderately well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 45 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

766 KRATKA LOAMY FINE SAND, DEPRESSIONAL, STRATIFIED SUBSTRATUM, 0 TO 1 PERCENT SLOPES

Kratka, Depressional, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 13 inches thick. This soil is very deep and very poorly drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

776B SANBURN-MILACA COMPLEX, 3 TO 8 PERCENT SLOPES

Sanburn soil makes up 60 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 6 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

Milaca soil makes up 25 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 6 inches thick. This soil is very deep and well drained. The surface layer has a low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

1013 PITS, QUARRY

No description available.

1015 UDIPSAMMENTS, CUT AND FILL LAND

Udipsamments soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is sand about 14 inches thick. This soil is very deep and excessively drained. The surface layer has a very low content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 8s. This soil is not hydric.

1030 PITS, GRAVEL-UDIPSAMMENTS COMPLEX

No description available.

Udipsamments soil makes up 45 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is sand about 14 inches thick. This soil is very deep and excessively drained. The surface layer has a very low content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 8s. This soil is not hydric.

1031 SEELYEVILLE MUCK, PONDED, 0 TO 1 PERCENT SLOPES

Seelyeville, Ponded, soil makes up 85 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is muck about 13 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 8w. This soil is hydric.

1364 ROCK OUTCROP-UDIPSAMMENTS COMPLEX

No description available.

Udipsamments soil makes up 20 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy sand about 14 inches thick. This soil is very deep and excessively drained. The surface layer has a very low content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 8s. This soil is not hydric.

1946 FORDUM-WINTERFIELD COMPLEX, 0 TO 2 PERCENT SLOPES, FREQUENTLY FLOODED

Fordum, Frequently flooded, soil makes up 65 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is --- about 6 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

Winterfield, Occasionally flooded, soil makes up 20 percent of the map unit. This map unit is in the Wisconsin and Minnesota Sandy Outwash Major Land Resource Area. Typically the surface layer is loamy fine sand about 8 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 4w. This soil is not hydric.

1976B BRAINERD SANDY LOAM, 0 TO 5 PERCENT SLOPES, VERY STONY

Brainerd, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 30 inches. The land capability classification is 6s. This soil is not hydric.

1977 MORA LOAM, 0 TO 3 PERCENT SLOPES, VERY STONY

Mora, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loam about 4 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The soil contains a maximum amount of 15 percent calcium carbonate. The land capability classification is 6s. This soil is not hydric.

1978 NOKAY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES, VERY STONY

Nokay, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is fine sandy loam about 7 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The land capability classification is 6s. This soil is not hydric.

1979 PARENT LOAM, 0 TO 1 PERCENT SLOPES, VERY STONY

Parent, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loam about 7 inches thick. This soil is very deep and poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The soil contains a maximum amount of 30 percent calcium carbonate. The land capability classification is 6s. This soil is hydric.

1980 RONNEBY LOAM, 0 TO 2 PERCENT SLOPES, VERY STONY

Ronneby, Very stony, soil makes up 90 percent of the map unit. This map unit is in the Central Wisconsin and Minnesota Thin Loess and Till Major Land Resource Area. Typically the surface layer is loam about 4 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 18 inches. The land capability classification is 6s. This soil is not hydric.

CW CENSUS WATER

No description available.

Big Stone County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Blue Earth County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Brown County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Carlton County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Carver County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Cass County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Chippewa County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

40B--Nebish Loam, 2 To 6 Percent Slopes

Component Description

Nebish and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 40 inches; clay loam
H3--40 to 60 inches; loam

40C--Nebish Loam, 6 To 12 Percent Slopes

Component Description

Nebish and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 33 inches; clay loam
H3--33 to 60 inches; loam

40D--Nebish Loam, 12 To 25 Percent Slopes

Component Description

Nebish and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 42 inches; clay loam
H3--42 to 60 inches; loam

40F--Nebish Loam, 25 To 40 Percent Slopes

Component Description

Nebish and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Shoulder
Slope range: 25 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 6 inches; fine sandy loam
H3--6 to 22 inches; clay loam
H4--22 to 60 inches; loam

75--Bluffton Loam

Component Description

Bluffton and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May December
Wet soil moisture status is lowest (depth, months):
2.0 feet February March August
Ponding is shallowest (depth, months):
0.5 foot April June
Ponding is deepest (depth, months):
1.0 foot May
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 19 inches; loam
H2--19 to 40 inches; loam
H3--40 to 60 inches; loam

119B--Pomroy Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Pomroy and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine

Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 9 inches; loamy fine sand
H2--9 to 20 inches; loamy fine sand
H3--20 to 40 inches; sandy loam
H4--40 to 60 inches; sandy loam

119C--Pomroy Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Pomroy and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
H1--0 to 5 inches; loamy fine sand
H2--5 to 25 inches; loamy fine sand
H3--25 to 45 inches; sandy loam
H4--45 to 60 inches; sandy loam

155B--Chetek Sandy Loam, 1 To 6 Percent Slopes

Component Description

Chetek and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 24 inches; sandy loam
H3--24 to 60 inches; gravelly sand

155C--Chetek Loam, 6 To 12 Percent Slopes

Component Description

Chetek and similar soils

Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 23 inches; sandy loam
H3--23 to 60 inches; gravelly sand

158B--Zimmerman Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 8 inches; loamy fine sand
H2--8 to 60 inches; fine sand

158C--Zimmerman Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 8 inches; loamy fine sand
H2--8 to 60 inches; fine sand

159B--Anoka Loamy Very Fine Sand, 1 To 6 Percent Slopes

Component Description

Anoka and similar soils
Extent: 100 percent of the unit

Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy very fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 9 inches; loamy very fine sand
H2--9 to 51 inches; loamy very fine sand
H3--51 to 60 inches; fine sand

159C--Anoka Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Anoka and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 6 inches; loamy fine sand
H2--6 to 56 inches; loamy very fine sand
H3--56 to 60 inches; fine sand

161--Isanti Loamy Fine Sand

Component Description

Isanti and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May
Wet soil moisture status is lowest (depth, months):
2.0 feet January February August
September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 9.0 percent
Typical profile:
H1--0 to 12 inches; loamy fine sand
H2--12 to 36 inches; fine sand
H3--36 to 60 inches; fine sand

162--Lino Loamy Fine Sand

Component Description

Lino and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
3.9 feet January February August
September
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; loamy fine sand
H2--8 to 42 inches; loamy fine sand
H3--42 to 60 inches; fine sand

169B--Braham Loamy Fine Sand, 2 To 6 Percent Slopes

Component Description

Braham and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; loamy fine sand
H2--8 to 20 inches; loamy fine sand
H3--20 to 41 inches; clay loam
H4--41 to 60 inches; loam

169C--Braham Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Braham and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; loamy fine sand

H2--8 to 20 inches; fine sand
H3--20 to 55 inches; clay loam
H4--55 to 60 inches; loam

182--Halder Sandy Loam

Component Description

Halder and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Outwash plain
Position on landform:
Summit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
3.3 feet January February March August
September
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 32 inches; loam
H3--32 to 40 inches; loamy sand
H4--40 to 60 inches; sand

204B--Cushing Loam, 2 To 6 Percent Slopes

Component Description

Cushing and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 5 inches; loam
H2--5 to 12 inches; loam
H3--12 to 40 inches; loam
H4--40 to 60 inches; loam

204C--Cushing Loam, 6 To 12 Percent Slopes

Component Description

Cushing and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 14 inches; sandy loam
H3--14 to 53 inches; loam
H4--53 to 60 inches; loam

204D--Cushing Loam, 12 To 20 Percent Slopes

Component Description

Cushing and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 20 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 40 inches; loam
H3--40 to 60 inches; loam

204F--Cushing Loam, 20 To 35 Percent Slopes

Component Description

Cushing and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 20 to 35 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 3 inches; loam
H2--3 to 6 inches; loam
H3--6 to 32 inches; loam
H4--32 to 60 inches; loam

207B--Nymore Loamy Sand, 1 To 6 Percent Slopes

Component Description

Nymore and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent

Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; loamy sand
H2--7 to 27 inches; loamy coarse sand
H3--27 to 60 inches; sand

207C--Nymore Loamy Sand, 6 To 12 Percent Slopes

Component Description

Nymore and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 4 inches; loamy sand
H2--4 to 15 inches; loamy coarse sand
H3--15 to 60 inches; sand

207D--Nymore Loamy Sand, 12 To 18 Percent Slopes

Component Description

Nymore and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 5 inches; loamy sand
H2--5 to 21 inches; loamy coarse sand
H3--21 to 60 inches; sand

207E--Nymore Loamy Sand, 18 To 25 Percent Slopes

Component Description

Nymore and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Shoulder

Slope range: 18 to 25 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 4 inches; loamy sand
H2--4 to 18 inches; loamy coarse sand
H3--18 to 60 inches; sand

265--Soderville Loamy Fine Sand

Component Description

Soderville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Outwash plain
Drainageway
Position on landform:
Summit
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
3.9 feet January February August
September
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 9 inches; loamy fine sand
H2--9 to 32 inches; fine sand
H3--32 to 45 inches; loamy fine sand
H4--45 to 60 inches; loamy sand

274--Newson Mucky Loamy Sand

Component Description

Newson and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Mucky loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May
Wet soil moisture status is lowest (depth, months):
2.0 feet January February August
September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 12.2 percent
Typical profile:
H1--0 to 8 inches; mucky loamy sand
H2--8 to 32 inches; loamy sand
H3--32 to 60 inches; sand

292--Alstad Loam

Component Description

Alstad and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Flat
Moraine
Position on landform:
Summit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 13 inches; loam
H3--13 to 25 inches; loam
H4--25 to 39 inches; clay loam
H5--39 to 60 inches; loam

325--Prebish Sandy Loam

Component Description

Prebish and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May
Wet soil moisture status is lowest (depth, months):
1.5 feet March August
Ponding is shallowest (depth, months):
0.5 foot April June
Ponding is deepest (depth, months):
1.0 foot May
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; sandy loam
H2--18 to 42 inches; sandy loam
H3--42 to 60 inches; sandy loam

328B--Sartell Fine Sand, 1 To 6 Percent Slopes

Component Description

Sartell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; fine sand
H2--8 to 25 inches; fine sand
H3--25 to 60 inches; fine sand

328C--Sartell Fine Sand, 6 To 12 Percent Slopes

Component Description

Sartell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 5 inches; fine sand
H2--5 to 29 inches; fine sand
H3--29 to 60 inches; fine sand

328D--Sartell Fine Sand, 12 To 25 Percent Slopes

Component Description

Sartell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 12 to 25 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 4 inches; fine sand
H2--4 to 26 inches; fine sand
H3--26 to 60 inches; fine sand

337--Warman Loam

Component Description

Warman and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May

Wet soil moisture status is lowest (depth, months):
2.0 feet January February August
September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 13.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 34 inches; loam
H3--34 to 60 inches; sand

346--Talmoon Loam

Component Description

Talmoon and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Swale
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.7 foot April
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 12 inches; loam
H3--12 to 24 inches; clay loam
H4--24 to 60 inches; loam

454B--Mahtomedi Loamy Sand, 1 To 6 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 8 inches; loamy sand
H2--8 to 22 inches; loamy coarse sand
H3--22 to 40 inches; coarse sand
H4--40 to 60 inches; sand

454C--Mahtomedi Loamy Sand, 6 To 12 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit

Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 8 inches; loamy sand
H2--8 to 29 inches; sand
H3--29 to 51 inches; coarse sand
H4--51 to 60 inches; coarse sand

454D--Mahtomedi Loamy Sand, 12 To 20 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 12 to 20 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; loamy sand
H2--4 to 12 inches; loamy coarse sand
H3--12 to 34 inches; coarse sand
H4--34 to 60 inches; gravelly sand

454F--Mahtomedi Loamy Sand, 20 To 35 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 20 to 35 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 9 inches; loamy coarse sand
H3--9 to 60 inches; gravelly sand

540--Seelyeville Muck

Component Description

Seelyeville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression

Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June July October
November December
Wet soil moisture status is lowest (depth, months):
0.5 foot February
Ponding is shallowest (depth, months):
0.5 foot June October
Ponding is deepest (depth, months):
1.0 foot April May November
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 32 inches; muck
H2--32 to 60 inches; muck

543--Markey Muck

Component Description

Markey and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June July August
September October November
Wet soil moisture status is lowest (depth, months):
0.5 foot February March
Ponding is shallowest (depth, months):
0.5 foot July September
Ponding is deepest (depth, months):
1.0 foot April May June November
Available water capacity to a depth of 60 inches: 13.8 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 30 inches; muck
H2--30 to 60 inches; loamy sand

544--Cathro Muck

Component Description

Cathro and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June July August
September October November
Wet soil moisture status is lowest (depth, months):
0.5 foot February March
Ponding is shallowest (depth, months):
0.5 foot July September
Ponding is deepest (depth, months):
1.0 foot April May June November
Available water capacity to a depth of 60 inches: 22.6 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 38 inches; muck
H2--38 to 60 inches; loam

545--Rondeau Muck

Component Description

Rondeau and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swamp
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June July August
September October November
Wet soil moisture status is lowest (depth, months):
0.5 foot February March
Ponding is shallowest (depth, months):
0.5 foot July September
Ponding is deepest (depth, months):
1.0 foot April May June November
Available water capacity to a depth of 60 inches: 20.8 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 39 inches; muck
H2--39 to 60 inches; marl

565--Eckvoll Loamy Sand

Component Description

Eckvoll and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 8 inches; loamy sand
H2--8 to 24 inches; loamy fine sand
H3--24 to 45 inches; clay loam
H4--45 to 60 inches; loam

676B--Kost Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Kost and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None

Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 17 inches; loamy fine sand
H2--17 to 29 inches; fine sand
H3--29 to 60 inches; fine sand

677--Siren Silt Loam

Component Description

Siren and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Lake plain
Terrace
Position on landform:
Summit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April May November
Wet soil moisture status is lowest (depth, months):
3.3 feet February March
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 2 inches; silt loam
H2--2 to 6 inches; silt loam
H3--6 to 34 inches; silty clay
H4--34 to 60 inches; silty clay

678--Beltrami Loam, Thick Solum

Component Description

Beltrami and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Moraine
Position on landform:
Summit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 11 inches; sandy loam
H3--11 to 32 inches; clay loam
H4--32 to 60 inches; clay loam

682B--Milaca Sandy Loam, 2 To 6 Percent Slopes, Very Stony

Component Description

Milaca and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine

Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 6 inches; sandy loam
H2--6 to 16 inches; fine sandy loam
H3--16 to 24 inches; sandy loam
H4--24 to 35 inches; sandy loam
H5--35 to 60 inches; sandy loam

682C--Milaca Sandy Loam, 6 To 12 Percent Slopes, Very Stony

Component Description

Milaca and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 6 inches; sandy loam
H2--6 to 15 inches; fine sandy loam
H3--15 to 23 inches; sandy loam
H4--23 to 35 inches; sandy loam
H5--35 to 60 inches; sandy loam

682D--Milaca Sandy Loam, 12 To 18 Percent Slopes, Very Stony

Component Description

Milaca and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 6 inches; sandy loam
H2--6 to 14 inches; fine sandy loam
H3--14 to 25 inches; sandy loam
H4--25 to 40 inches; sandy loam
H5--40 to 60 inches; sandy loam

682E--Milaca Sandy Loam, 18 To 25 Percent Slopes, Very Stony

Component Description

Milaca and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; sandy loam
H2--4 to 16 inches; fine sandy loam
H3--16 to 22 inches; sandy loam
H4--22 to 40 inches; sandy loam
H5--40 to 60 inches; sandy loam

717B--Novak Silt Loam, 0 To 6 Percent Slopes

Component Description

Novak and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 0 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 17 inches; silt loam
H3--17 to 34 inches; silt loam
H4--34 to 38 inches; sandy loam
H5--38 to 60 inches; sand

722--Blomford Loamy Sand, Lacustrine Substratum

Component Description

Blomford and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Swale
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.7 foot April
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:

H1--0 to 8 inches; loamy sand
H2--8 to 24 inches; loamy sand
H3--24 to 37 inches; silty clay loam
H4--37 to 60 inches; silt loam

726--Kratka Loamy Fine Sand, Thick Solum

Component Description

Kratka and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May
Wet soil moisture status is lowest (depth, months):
2.0 feet February March August
Ponding is shallowest (depth, months):
0.5 foot April June
Ponding is deepest (depth, months):
1.0 foot May
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 30 inches; sand
H3--30 to 60 inches; clay loam

792--Fordum Sandy Loam, Frequently Flooded

Component Description

Fordum and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September November December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet January February
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 26 inches; sandy loam
H2--26 to 40 inches; sandy loam
H3--40 to 60 inches; sand

928B--Mahtomedi-Cushing Complex, 2 To 6 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 8 inches; loamy sand
H2--8 to 40 inches; coarse sand
H3--40 to 60 inches; coarse sand

Cushing and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 5 inches; loam
H2--5 to 12 inches; loam
H3--12 to 40 inches; loam
H4--40 to 60 inches; loam

928C--Mahtomedi-Cushing Complex, 6 To 12 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 8 inches; loamy sand
H2--8 to 29 inches; coarse sand
H3--29 to 60 inches; coarse sand

Cushing and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent

Typical profile:
H1--0 to 8 inches; loam
H2--8 to 14 inches; loam
H3--14 to 53 inches; loam
H4--53 to 60 inches; loam

928D--Mahtomedi-Cushing Complex, 12 To 20 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 20 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 4 inches; loamy sand
H2--4 to 12 inches; loamy coarse sand
H3--12 to 34 inches; coarse sand
H4--34 to 60 inches; gravelly sand

Cushing and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 20 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 40 inches; loam
H3--40 to 60 inches; loam

1030--Udorthents-Pits, Gravel, Complex

Component Description

Udorthents and similar soils
Extent: 60 percent of the unit
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

Pits
Extent: 40 percent of the unit

1068--Caryville Sandy Loam, Occasionally Flooded

Component Description

Caryville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain

Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
July August September October November December
Flooding is most likely (frequency, months):
Occasional April May June
Wet soil moisture status is highest (depth, months):
3.9 feet April May June July
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February August
September December
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 60 inches; stratified sand to loam

1069C--Fairport-Rock Outcrop Complex, 2 To 12 Percent Slopes

Component Description

Fairport and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Bedrock (lithic): 20 to 40 inches
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 3.3 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 24 inches; loam
H3--24 to 34 inches;

Rock outcrop and similar soils
Extent: 25 percent of the unit
Slope range: 2 to 12 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

1070D--Plainbo-Rock Outcrop Complex, 12 To 40 Percent Slopes

Component Description

Plainbo and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Terrace
Position on landform:
Summit
Backslope
Slope range: 12 to 40 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Bedrock (paralithic): 20 to 40 inches
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 3.3 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 1.9 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 5 inches; loamy sand

H2--5 to 23 inches; loamy sand
H3--23 to 33 inches;

Rock outcrop and similar soils
Extent: 25 percent of the unit
Slope range: 12 to 40 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

1977--Mora Loam, Very Stony

Component Description

Mora and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March August
September
Ponding: None
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 12 inches; loam
H3--12 to 30 inches; sandy loam
H4--30 to 50 inches; sandy loam
H5--50 to 60 inches; sandy loam

1980--Ronneby Loam, Extremely Stony

Component Description

Ronneby and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March August
September
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 11 inches; sandy loam
H3--11 to 28 inches; sandy loam
H4--28 to 38 inches; sandy loam
H5--38 to 60 inches; sandy loam

CW--Census Water

Component Description

Census water
Extent: 100 percent of the unit

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/26/2002

Soil Descriptions - Non Technical

33B--Barnes Loam, 1 To 3 Percent Slopes

Component Description

Barnes and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 18 inches; loam
H3--18 to 60 inches; loam

33B2--Barnes Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Barnes and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 18 inches; loam
H3--18 to 60 inches; loam

33C2--Barnes Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Barnes and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 18 inches; loam
H3--18 to 60 inches; loam

36--Flom Clay Loam

Component Description

Flom and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.7 foot April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 23 inches; silty clay loam
H3--23 to 60 inches; loam

38B--Waukon Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 34 inches; fine sandy loam
H3--34 to 60 inches; fine sandy loam

38B2--Waukon Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; sandy clay loam
H3--21 to 60 inches; fine sandy loam

38C--Waukon Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 34 inches; sandy clay loam
H3--34 to 60 inches; loam

38C2--Waukon Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; sandy clay loam
H3--21 to 60 inches; loam

38D--Waukon Fine Sandy Loam, 12 To 18 Percent Slopes

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 34 inches; sandy clay loam
H3--34 to 60 inches; loam

38D2--Waukon Loam, 12 To 18 Percent Slopes, Eroded

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; sandy clay loam
H3--21 to 60 inches; loam

38E--Waukon Fine Sandy Loam, 18 To 30 Percent Slopes

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 18 to 30 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 34 inches; sandy clay loam
H3--34 to 60 inches; loam

45B--Maddock Fine Sand, 0 To 4 Percent Slopes

Component Description

Maddock and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 16 inches; fine sand
H2--16 to 60 inches; fine sand

45C--Maddock Fine Sand, 4 To 12 Percent Slopes

Component Description

Maddock and similar soils
Extent: 90 percent of the unit
Slope range: 4 to 12 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 16 inches; fine sand
H2--16 to 60 inches; fine sand

46--Borup Loam

Component Description

Borup and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Swale
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August

September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.7 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 18 inches; very fine sandy loam
H3--18 to 60 inches; loamy very fine sand

47--Colvin Silty Clay Loam

Component Description

Colvin and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 11 inches; silty clay loam
H2--11 to 23 inches; silt loam
H3--23 to 60 inches; silty clay loam

50--Cashel Silty Clay

Component Description

Cashel and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding does not occur (months):
January February June July August September October
November December
Flooding is most likely (frequency, months):
Occasional March April May
Wet soil moisture status is highest (depth, months):
2.5 feet March July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; silty clay
H2--17 to 60 inches; silty clay

52--Augsburg Silt Loam

Component Description

Augsburg and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Swale

Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 18 inches; silt loam
H3--18 to 31 inches; very fine sandy loam
H4--31 to 60 inches; silty clay

56--Fargo Silty Clay Loam

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.8 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 24 inches; silty clay
H3--24 to 60 inches; silty clay

57A--Fargo Silty Clay, 0 To 2 Percent Slopes

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Swale
Slope range: 1 to 3 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December

Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 12 inches; silty clay
H2--12 to 24 inches; silty clay
H3--24 to 60 inches; silty clay

57B--Fargo Silty Clay, 2 To 6 Percent Slopes

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 2 to 3 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 12 inches; silty clay
H2--12 to 24 inches; silty clay
H3--24 to 60 inches; silty clay

58A--Kittson Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Kittson and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 17 inches; fine sandy loam
H3--17 to 36 inches; loam
H4--36 to 60 inches; loam

58B--Kittson Loam, 1 To 5 Percent Slopes

Component Description

Kittson and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None

Wet soil moisture status is highest (depth, months):
2.5 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 17 inches; fine sandy loam
H3--17 to 36 inches; loam
H4--36 to 60 inches; loam

59--Grimstad Fine Sandy Loam

Component Description

Grimstad and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.8 feet April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 15 inches; fine sandy loam
H2--15 to 23 inches; loamy fine sand
H3--23 to 60 inches; loam

60A--Glyndon Loam, 0 To 2 Percent Slopes

Component Description

Glyndon and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 31 inches; loam
H3--31 to 60 inches; loamy very fine sand

60B2--Glyndon Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Glyndon and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None

Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 25 inches; very fine sandy loam
H3--25 to 60 inches; very fine sand

61--Arveson Clay Loam

Component Description

Arveson and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 34 inches; loam
H3--34 to 60 inches; loamy sand

63--Rockwell Clay Loam

Component Description

Rockwell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Flat
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 18 inches; fine sandy loam
H3--18 to 28 inches; fine sand
H4--28 to 60 inches; silt loam

64--Ulen Fine Sandy Loam

Component Description

Ulen and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 13 inches; fine sandy loam
H2--13 to 25 inches; fine sand
H3--25 to 60 inches; fine sand

65--Foxhome Fine Sandy Loam

Component Description

Foxhome and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 18 inches; loamy sand
H3--18 to 27 inches; very gravelly loamy sand
H4--27 to 60 inches; loam

66--Flaming Fine Sand

Component Description

Flaming and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 13 inches; fine sand
H2--13 to 60 inches; fine sand

67A--Bearden Silt Loam, 0 To 2 Percent Slopes

Component Description

Bearden and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 24 inches; silt loam
H3--24 to 60 inches; silt loam

67B2--Bearden Silt Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Bearden and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 24 inches; silt loam
H3--24 to 60 inches; silt loam

68--Arveson Clay Loam, Depressional

Component Description

Arveson and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April

Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 34 inches; loam
H3--34 to 60 inches; sandy loam

71--Fossum Loamy Sand

Component Description

Fossum and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 18 inches; loamy sand
H2--18 to 60 inches; fine sand

93--Bearden Silty Clay Loam

Component Description

Bearden and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 31 inches; silty clay loam
H3--31 to 60 inches; silt loam

127B--Sverdrup Sandy Loam, 1 To 4 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 21 inches; sandy loam
H3--21 to 60 inches; fine sand

127C--Sverdrup Sandy Loam, 4 To 12 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 90 percent of the unit
Slope range: 4 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 21 inches; sandy loam
H3--21 to 60 inches; fine sand

148--Poppleton Fine Sand

Component Description

Poppleton and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
H1--0 to 8 inches; fine sand
H2--8 to 60 inches; fine sand

157A--Wahpeton Silty Clay, 0 To 2 Percent Slopes

Component Description

Wahpeton and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 34 inches; silty clay
H2--34 to 60 inches; silty clay

157B--Wahpeton Silty Clay, 2 To 6 Percent Slopes

Component Description

Wahpeton and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 34 inches; silty clay
H2--34 to 60 inches; silty clay

157C--Wahpeton Silty Clay, 6 To 12 Percent Slopes

Component Description

Wahpeton and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 34 inches; silty clay
H2--34 to 60 inches; silty clay

180B--Gonvick Clay Loam, 1 To 4 Percent Slopes

Component Description

Gonvick and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 22 inches; clay loam
H3--22 to 60 inches; loam

184B--Hamerly Loam, 1 To 4 Percent Slopes

Component Description

Hamerly and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 24 inches; loam
H3--24 to 60 inches; loam

236--Vallers Loam

Component Description

Vallers and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 26 inches; clay loam
H3--26 to 60 inches; loam

245B--Lohnes Coarse Sandy Loam, 1 To 6 Percent Slopes

Component Description

Lohnes and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; coarse sandy loam
H2--9 to 60 inches; coarse sand

293B--Swenoda Sandy Loam, 1 To 4 Percent Slopes

Component Description

Swenoda and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent

Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 13 inches; sandy loam
H2--13 to 32 inches; sandy loam
H3--32 to 60 inches; loam

335--Urness Mucky Silt Loam

Component Description

Urness and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Lakebed
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 30.0 percent
Typical profile:
H1--0 to 10 inches; mucky silt loam
H2--10 to 60 inches; mucky silt loam

343A--Wheatville Silt Loam, 0 To 2 Percent Slopes

Component Description

Wheatville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 4.7 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 23 inches; very fine sandy loam
H3--23 to 60 inches; silty clay

343B2--Wheatville Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Wheatville and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 23 inches; very fine sandy loam
H3--23 to 60 inches; silty clay

344--Quam Clay Loam

Component Description

Quam and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
H1--0 to 12 inches; clay loam
H2--12 to 60 inches; clay loam
H3--60 to 65 inches; clay loam

402B--Sioux Sandy Loam, 1 To 6 Percent Slopes

Component Description

Sioux and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 14 inches; gravelly loamy coarse sand
H3--14 to 60 inches; very gravelly loamy coarse sand

402C--Sioux Sandy Loam, 6 To 12 Percent Slopes

Component Description

Sioux and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 14 inches; gravelly loamy sand
H3--14 to 60 inches; very gravelly loamy sand

402D--Sioux Loamy Coarse Sand, 12 To 18 Percent Slopes

Component Description

Sioux and similar soils
Extent: 100 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 12 inches; loamy coarse sand
H2--12 to 60 inches; very gravelly loamy sand

402E--Sioux Bouldery Loamy Coarse Sand, 12 To 30 Percent Slopes

Component Description

Sioux and similar soils
Extent: 100 percent of the unit
Slope range: 12 to 30 percent
Surface layer texture: Bouldery loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 3 inches; bouldery loamy coarse sand
H2--3 to 15 inches; gravelly loamy sand
H3--15 to 60 inches; very gravelly sand

403--Viking Sandy Clay Loam

Component Description

Viking and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Sandy clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):

January February March August September October November
December
        Flooding is most likely (frequency, months):
Rare   April May June July
        Wet soil moisture status is highest (depth, months):
2.0 feet   April May June
        Wet soil moisture status is lowest (depth, months):
More than 5.0 feet   January February March August
  September October November
  December
        Ponding: None
        Available water capacity to a depth of 60 inches: 7.6 inches
        Content of organic matter in the upper 10 inches: 5.0 percent
        Typical profile:
H1--0 to 12 inches; sandy clay loam
H2--12 to 21 inches; clay
H3--21 to 60 inches; clay

413--Osakis Loam

  Component Description

     Osakis and similar soils
        Extent: 90 percent of the unit
        Slope range: 0 to 2 percent
        Surface layer texture: Loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Moderately well drained
        Flooding: None
        Wet soil moisture status is highest (depth, months):
2.5 feet   April May June
        Wet soil moisture status is lowest (depth, months):
More than 5.0 feet   January February August
  September October November
  December
        Ponding: None
        Available water capacity to a depth of 60 inches: 4.7 inches
        Content of organic matter in the upper 10 inches: 2.5 percent
        Typical profile:
H1--0 to 8 inches; loam
H2--8 to 17 inches; sandy loam
H3--17 to 30 inches; gravelly loamy sand
H4--30 to 60 inches; gravelly coarse sand

425--Donaldson Fine Sandy Loam

  Component Description

     Donaldson and similar soils
        Extent: 90 percent of the unit
        Slope range: 0 to 2 percent
        Surface layer texture: Fine sandy loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Moderately well drained
        Flooding: None
        Wet soil moisture status is highest (depth, months):
3.0 feet   April May
        Wet soil moisture status is lowest (depth, months):
More than 5.0 feet   January February March August
  September October November
  December
        Ponding: None
        Available water capacity to a depth of 60 inches: 9.1 inches
        Content of organic matter in the upper 10 inches: 4.2 percent
        Typical profile:
H1--0 to 9 inches; fine sandy loam
H2--9 to 26 inches; very fine sandy loam
H3--26 to 32 inches; very fine sandy loam
H4--32 to 60 inches; clay

426--Foldahl Loamy Fine Sand

  Component Description

     Foldahl and similar soils

Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 11 inches; loamy fine sand
H2--11 to 29 inches; loamy fine sand
H3--29 to 60 inches; loam

429--Northcote Clay

Component Description

Northcote and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
2.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 18 inches; clay
H2--18 to 35 inches; clay
H3--35 to 60 inches; clay

435--Syrene Sandy Clay Loam

Component Description

Syrene and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Sandy clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 5.1 percent
Typical profile:
H1--0 to 9 inches; sandy clay loam
H2--9 to 17 inches; sandy clay loam
H3--17 to 60 inches; stratified loamy fine sand to gravelly
coarse sand

494--Darnen Loam

Component Description

Darnen and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 25 inches; loam
H2--25 to 48 inches; loam
H3--48 to 60 inches; loam

506--Overly Silty Clay Loam

Component Description

Overly and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 19 inches; silty clay loam
H3--19 to 60 inches; stratified silt loam to silty clay

508--Wyndmere Fine Sandy Loam

Component Description

Wyndmere and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 29 inches; fine sandy loam
H3--29 to 60 inches; fine sand

509--Vallers Bouldery Loam

Component Description

Vallers and similar soils

Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Bouldery loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 11 inches; bouldery loam
H2--11 to 21 inches; clay loam
H3--21 to 60 inches; loam

510--Elmville Fine Sandy Loam

Component Description

Elmville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.7 feet April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; fine sandy loam
H2--14 to 30 inches; very fine sandy loam
H3--30 to 60 inches; clay

540--Seelyeville Muck

Component Description

Seelyeville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture:
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding is shallowest (depth, months):
0.3 foot August September
Ponding is deepest (depth, months):
1.0 foot April October
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:

H1--0 to 16 inches;
H2--16 to 60 inches; muck

543--Markey Muck

Component Description

Markey and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding is shallowest (depth, months):
0.3 foot August September
Ponding is deepest (depth, months):
1.0 foot April October
Available water capacity to a depth of 60 inches: 13.1 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 28 inches; muck
H2--28 to 60 inches; fine sand

544--Cathro Muck

Component Description

Cathro and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture:
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding is shallowest (depth, months):
0.3 foot August September
Ponding is deepest (depth, months):
1.0 foot April October
Available water capacity to a depth of 60 inches: 16.3 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 21 inches;
H2--21 to 60 inches; clay loam

545--Rondeau Muck

Component Description

Rondeau and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression

Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding is shallowest (depth, months):
0.3 foot August September
Ponding is deepest (depth, months):
1.0 foot April October
Available water capacity to a depth of 60 inches: 23.1 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 50 inches; muck
H2--50 to 60 inches; marl

609--Dickey Loamy Fine Sand

Component Description

Dickey and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 26 inches; loamy sand
H3--26 to 60 inches; silty clay loam

841--Urban Land-Fargo Complex

Component Description

Urban land
Extent: 80 percent of the unit

Fargo and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 12 inches; silty clay

H2--12 to 24 inches; silty clay
H3--24 to 60 inches; clay

892B--Sioux-Sverdrup Complex, 1 To 6 Percent Slopes

Component Description

Sioux and similar soils
Extent: 55 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 26 inches; gravelly loamy sand
H3--26 to 60 inches; very gravelly loamy sand

Sverdrup and similar soils
Extent: 35 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 15 inches; sandy loam
H3--15 to 60 inches; fine sand

892C--Sioux-Sverdrup Complex, 6 To 18 Percent Slopes

Component Description

Sioux and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 12 inches; gravelly loamy sand
H3--12 to 60 inches; very gravelly loamy sand

Sverdrup and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 15 inches; sandy loam
H3--15 to 60 inches; fine sand

893E--Lohnes-Waukon Complex, 12 To 30 Percent Slopes

Component Description

Lohnes and similar soils
Extent: 55 percent of the unit
Slope range: 12 to 15 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; coarse sandy loam
H2--10 to 60 inches; coarse sand

Waukon and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 5 inches; sandy loam
H2--5 to 13 inches; clay loam
H3--13 to 60 inches; loam

903B--Barnes-Langhei Loams, 1 To 6 Percent Slopes

Component Description

Barnes and similar soils
Extent: 65 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 15 inches; loam
H3--15 to 60 inches; loam

Langhei and similar soils
Extent: 25 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

908--Bearden-Fargo Complex

Component Description

Bearden and similar soils
Extent: 55 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 31 inches; silty clay loam
H3--31 to 44 inches; silt loam
H4--44 to 60 inches; silt loam

Fargo and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 12 inches; silty clay
H2--12 to 24 inches; silty clay
H3--24 to 39 inches; silty clay
H4--39 to 60 inches; silty clay loam

935--Hegne-Fargo Silty Clays

Component Description

Hegne and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Rise
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September December
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 9 inches; silty clay
H2--9 to 27 inches; silty clay

H3--27 to 34 inches; silty clay
H4--34 to 60 inches; clay

Fargo and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 12 inches; silty clay
H2--12 to 24 inches; silty clay
H3--24 to 60 inches; silty clay

942C2--Langhei-Barnes Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Langhei and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 17 inches; loam
H3--17 to 60 inches; loam

Barnes and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 14 inches; loam
H3--14 to 60 inches; loam

942D2--Langhei-Barnes Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Langhei and similar soils
Extent: 55 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

Barnes and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 14 inches; loam
H3--14 to 60 inches; loam

966C--Waukon-Sioux Sandy Loams, 4 To 12 Percent Slopes

Component Description

Waukon and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 20 inches; clay loam
H3--20 to 60 inches; loam

Sioux and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 11 inches; gravelly loamy sand
H3--11 to 60 inches; very gravelly sand

966D--Waukon-Sioux Sandy Loams, 12 To 18 Percent Slopes

Component Description

Waukon and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 20 inches; clay loam
H3--20 to 60 inches; loam

Sioux and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 11 inches; gravelly loamy sand
H3--11 to 60 inches; very gravelly sand

967B2--Waukon-Langhei Loams, 1 To 6 Percent Slopes, Eroded

Component Description

Waukon and similar soils
Extent: 60 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; fine sandy loam
H3--21 to 60 inches; loam

Langhei and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

979C2--Langhei-Waukon Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Langhei and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches

Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Waukon and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; clay loam
H3--21 to 60 inches; loam

979D2--Langhei-Waukon Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Langhei and similar soils
Extent: 55 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Waukon and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; clay loam
H3--21 to 60 inches; loam

987--Rockwell Loam, Depressional

Component Description

Rockwell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September

Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 18 inches; fine sandy loam
H3--18 to 28 inches; fine sand
H4--28 to 60 inches; silt loam

1001--Haplaquolls And Udifluvents, Level

Component Description

Aquolls and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February November December
Flooding is most likely (frequency, months):
Frequent March April May June July August
September October
Wet soil moisture status is highest (depth, months):
At the surface March April May June July August
September October
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February November
December
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 16 inches; silt loam
H2--16 to 80 inches; stratified loamy sand to silt loam

Udifluvents and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February November December
Flooding is most likely (frequency, months):
Frequent March April May June July August
September October
Wet soil moisture status is highest (depth, months):
At the surface March April May June July August
September October
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February November
December
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 16 inches;
H2--16 to 80 inches;

1005--Fluvaquents, Loamy

Component Description

Fluvaquents and similar soils
Extent: 100 percent of the unit
Geomorphic description:

Flood plain
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March December
Flooding is most likely (frequency, months):
Frequent April May June July August
September October November
Wet soil moisture status is highest (depth, months):
At the surface April May October November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March December
Ponding: None

1006--Fluvaquents-Haploborolls Complex

Component Description

Fluvaquents and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flood plain
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March December
Flooding is most likely (frequency, months):
Frequent April May June July August
September October November
Wet soil moisture status: At the surface all year
Ponding: None

Haploborolls and similar soils
Extent: 35 percent of the unit
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None

1029--Pits, Gravel

Component Description

Pits
Extent: 100 percent of the unit

1055--Haplaquolls And Histosols, Ponded

Component Description

Aquolls and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Depression
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June October November
Wet soil moisture status is lowest (depth, months):
1.5 feet February March August
Ponding: At 0.2 foot all year

Histosols and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Depression
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):

0.5 foot August
Ponding is shallowest (depth, months):
0.5 foot July August September October
Ponding is deepest (depth, months):
1.0 foot January February March April May
June November December

1819--Glyndon Silty Clay Loam

Component Description

Glyndon and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 29 inches; silty clay loam
H2--29 to 60 inches; very fine sand

1854--Wyndmere Complex

Component Description

Wyndmere and similar soils
Extent: 70 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 29 inches; fine sandy loam
H3--29 to 60 inches; fine sandy loam

Wyndmere and similar soils
Extent: 20 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:
H1--0 to 8 inches; fine sandy loam
H2--8 to 26 inches; fine sandy loam

H3--26 to 60 inches; fine sandy loam

1871--Fargo Silty Clay, Swales

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August September
Ponding: At 0.2 foot all year
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 12 inches; silty clay
H2--12 to 24 inches; clay
H3--24 to 60 inches; clay

1872--Fargo Silty Clay, Silty Substratum

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
2.0 feet January February March April May
June September October November
December
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
H1--0 to 8 inches; silty clay
H2--8 to 16 inches; silty clay
H3--16 to 36 inches; silty clay
H4--36 to 60 inches; silty clay loam

1873--Fargo Silty Clay, Silty Substratum, Swales

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
At the surface April December
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 10 inches; silty clay
H2--10 to 18 inches; silty clay
H3--18 to 30 inches; silty clay
H4--30 to 60 inches; silty clay loam

1874--Lohnes Sandy Loam

Component Description

Lohnes and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet April May June July August
September October
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March November
December
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 14 inches; sandy loam
H2--14 to 23 inches; loamy sand
H3--23 to 60 inches; coarse sand

1875--Flom Clay Loam, Depressional

Component Description

Flom and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
At the surface April December
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 23 inches; silty clay loam
H3--23 to 60 inches; loam

1876--Divide Loam, Loamy Substratum

Component Description

Divide and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.7 feet January February March April May
June September October November
December
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 21 inches; loam
H3--21 to 44 inches; stratified sand to gravelly sand
H4--44 to 60 inches; loam

W--Water

Additional Components

Water: 100 percent of the unit

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/26/2002

Soil Descriptions - Non Technical

20B--Chapett Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Chapett and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; fine sandy loam
H2--9 to 21 inches; sandy clay loam
H3--21 to 60 inches; fine sandy loam

20C2--Chapett Fine Sandy Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Chapett and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 7 inches; fine sandy loam
H2--7 to 18 inches; sandy clay loam
H3--18 to 60 inches; fine sandy loam

38B--Waukon Loam, 2 To 6 Percent Slopes

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 22 inches; clay loam
H3--22 to 60 inches; loam

38C2--Waukon Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; clay loam
H3--21 to 60 inches; loam

38D2--Waukon Loam, 12 To 20 Percent Slopes, Eroded

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Slope range: 12 to 20 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 22 inches; clay loam
H3--22 to 60 inches; loam

40B--Nebish Loam, 2 To 8 Percent Slopes

Component Description

Nebish and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; loam
H2--3 to 9 inches; fine sandy loam
H3--9 to 26 inches; clay loam
H4--26 to 60 inches; loam

40C--Nebish Loam, 8 To 15 Percent Slopes

Component Description

Nebish and similar soils
Extent: 90 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches

Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; loam
H2--3 to 8 inches; fine sandy loam
H3--8 to 24 inches; clay loam
H4--24 to 60 inches; loam

40E--Nebish Loam, 15 To 30 Percent Slopes

Component Description

Nebish and similar soils
Extent: 90 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; loam
H2--3 to 8 inches; fine sandy loam
H3--8 to 23 inches; clay loam
H4--23 to 60 inches; loam

45E--Maddock Loamy Fine Sand, 12 To 30 Percent Slopes

Component Description

Maddock and similar soils
Extent: 90 percent of the unit
Slope range: 12 to 30 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 60 inches; fine sand

63--Rockwell Loam

Component Description

Rockwell and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 17 inches; loam
H3--17 to 32 inches; sand
H4--32 to 60 inches; loam

111--Hangaard Sandy Loam

Component Description

Hangaard and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.0 feet January September December
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 16 inches; gravelly coarse sand
H3--16 to 60 inches; coarse sand

121--Wykeham Fine Sandy Loam

Component Description

Wykeham and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 12 inches; fine sandy loam
H3--12 to 34 inches; loam
H4--34 to 60 inches; fine sandy loam

125--Beltrami Loam

Component Description

Beltrami and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 3 inches; loam
H2--3 to 9 inches; fine sandy loam
H3--9 to 25 inches; clay loam
H4--25 to 60 inches; loam

133B--Dalbo Silt Loam, 2 To 8 Percent Slopes

Component Description

Dalbo and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
4.0 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 6 inches; silt loam
H2--6 to 35 inches; silty clay
H3--35 to 60 inches; silt loam

133C--Dalbo Silt Loam, 8 To 15 Percent Slopes

Component Description

Dalbo and similar soils
Extent: 90 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
4.0 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 25 inches; silty clay
H3--25 to 60 inches; silt loam

133E--Dalbo Silt Loam, 15 To 30 Percent Slopes

Component Description

Dalbo and similar soils
Extent: 90 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.0 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 29 inches; silty clay
H3--29 to 60 inches; silt loam

167A--Baudette Silt Loam

Component Description

Baudette and similar soils
Extent: 90 percent of the unit

Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 3 inches; silt loam
H2--3 to 9 inches; very fine sandy loam
H3--9 to 30 inches; silty clay loam
H4--30 to 60 inches; silt loam

169B--Braham Loamy Fine Sand, 2 To 8 Percent Slopes

Component Description

Braham and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 25 inches; loamy fine sand
H3--25 to 35 inches; sandy clay loam
H4--35 to 60 inches; loam

169C--Braham Loamy Fine Sand, 8 To 15 Percent Slopes

Component Description

Braham and similar soils
Extent: 90 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 3 inches; loamy fine sand
H2--3 to 30 inches; loamy fine sand
H3--30 to 38 inches; sandy clay loam
H4--38 to 60 inches; loam

169E--Braham Loamy Fine Sand, 15 To 30 Percent Slopes

Component Description

Braham and similar soils
Extent: 90 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 3 inches; loamy fine sand
H2--3 to 32 inches; loamy fine sand
H3--32 to 48 inches; sandy clay loam
H4--48 to 60 inches; loam

180--Gonvick Loam

Component Description

Gonvick and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 23 inches; clay loam
H3--23 to 60 inches; loam

205--Karlstad Sandy Loam

Component Description

Karlstad and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 18 inches; sandy loam
H3--18 to 24 inches; gravelly coarse sandy loam
H4--24 to 60 inches;

258B--Sandberg Loamy Sand, 1 To 6 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy sand
H2--10 to 15 inches; loamy sand
H3--15 to 30 inches; gravelly sand

H4--30 to 60 inches; sand

267B--Snellman Sandy Loam, 2 To 8 Percent Slopes

Component Description

Snellman and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 12 inches; loamy fine sand
H3--12 to 30 inches; sandy clay loam
H4--30 to 60 inches; fine sandy loam

267C--Snellman Sandy Loam, 8 To 15 Percent Slopes

Component Description

Snellman and similar soils
Extent: 90 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 3 inches; sandy loam
H2--3 to 11 inches; loamy fine sand
H3--11 to 33 inches; sandy clay loam
H4--33 to 60 inches; fine sandy loam

267E--Snellman Sandy Loam, 15 To 30 Percent Slopes

Component Description

Snellman and similar soils
Extent: 90 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 3 inches; sandy loam
H2--3 to 16 inches; loamy fine sand
H3--16 to 38 inches; sandy clay loam
H4--38 to 60 inches; fine sandy loam

272--Bemidji Loamy Sand

Component Description

Bemidji and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loamy sand

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May June
Wet soil moisture status is lowest (depth, months):
3.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 6 inches; loamy sand
H2--6 to 24 inches; sand
H3--24 to 42 inches; sandy clay loam
H4--42 to 60 inches; fine sandy loam

346--Talmoon Loam

Component Description

Talmoon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 9 inches; fine sandy loam
H3--9 to 26 inches; clay loam
H4--26 to 60 inches; loam

426--Foldahl Loamy Fine Sand

Component Description

Foldahl and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 34 inches; fine sand
H3--34 to 60 inches; loam

435--Syrene Sandy Loam

Component Description

Syrene and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 17 inches; sandy loam
H3--17 to 60 inches;

439--Strathcona Fine Sandy Loam

Component Description

Strathcona and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 18 inches; fine sandy loam
H3--18 to 36 inches; fine sand
H4--36 to 60 inches; loam

481--Kratka Fine Sandy Loam

Component Description

Kratka and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 32 inches; fine sand
H3--32 to 60 inches; loam

496B--Andrusia Loamy Sand, 1 To 6 Percent Slopes

Component Description

Andrusia and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 32 inches; sand
H3--32 to 40 inches; coarse sandy loam
H4--40 to 60 inches; gravelly coarse sand

496C--Andrusia Loamy Sand, 6 To 12 Percent Slopes

Component Description

Andrusia and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 35 inches; sand
H3--35 to 43 inches; coarse sandy loam
H4--43 to 60 inches; gravelly coarse sand

505B--Debs Silt Loam, 2 To 8 Percent Slopes

Component Description

Debs and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
H1--0 to 2 inches; silt loam
H2--2 to 12 inches; very fine sandy loam
H3--12 to 32 inches; silty clay loam
H4--32 to 60 inches; silt loam

505C--Debs Silt Loam, 8 To 15 Percent Slopes

Component Description

Debs and similar soils
Extent: 90 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 3 inches; silt loam
H2--3 to 10 inches; very fine sandy loam
H3--10 to 26 inches; silty clay loam

H4--26 to 60 inches; silt loam

505E--Debs Silt Loam, 15 To 30 Per Ent Slopes

Component Description

Debs and similar soils
Extent: 90 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
H1--0 to 2 inches; silt loam
H2--2 to 9 inches; very fine sandy loam
H3--9 to 25 inches; silty clay loam
H4--25 to 60 inches; silt loam

540--Seelyeville Muck

Component Description

Seelyeville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.2 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 16 inches; muck
H2--16 to 60 inches; muck

543--Markey Muck

Component Description

Markey and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 23 inches; muck
H2--23 to 60 inches; fine sand

544--Cathro Muck

Component Description

Cathro and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 20.0 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 20 inches; muck
H2--20 to 34 inches;
H3--34 to 60 inches; loam

547--Deerwood Muck

Component Description

Deerwood and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 14 inches; muck
H2--14 to 20 inches; loamy sand
H3--20 to 60 inches; sand

561--Bullwinkle Muck

Component Description

Bullwinkle and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding: None

Available water capacity to a depth of 60 inches: 19.3 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 38 inches;
H3--38 to 43 inches; loam
H4--43 to 60 inches; loam

563--Northwood Muck

Component Description

Northwood and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 67.5 percent
Typical profile:
H1--0 to 12 inches; muck
H2--12 to 16 inches; fine sandy loam
H3--16 to 24 inches; fine sand
H4--24 to 60 inches; loam

564--Friendship Loamy Sand

Component Description

Friendship and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
H1--0 to 4 inches; loamy sand
H2--4 to 22 inches; sand
H3--22 to 36 inches; sand
H4--36 to 60 inches; sand

565--Eckvoll Loamy Fine Sand

Component Description

Eckvoll and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May June
Wet soil moisture status is lowest (depth, months):

3.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 8 inches; loamy fine sand
H2--8 to 30 inches; fine sand
H3--30 to 38 inches; sandy clay loam
H4--38 to 60 inches; loam

582--Roliss Loam

Component Description

Roliss and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 19 inches; loam
H3--19 to 31 inches; loam
H4--31 to 60 inches; loam

607--Pengilly Very Fine Sandy Loam, Frequently Flooded

Component Description

Pengilly and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding is least likely (frequency, months):
Rare January February March December
Flooding is most likely (frequency, months):
Frequent April May June October
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 3 inches; very fine sandy loam
H2--3 to 60 inches;

627--Tawas Muck

Component Description

Tawas and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding: None
Available water capacity to a depth of 60 inches: 14.1 inches
Content of organic matter in the upper 10 inches: 50.0 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 30 inches;
H3--30 to 60 inches; sand

650--Reiner Fine Sandy Loam

Component Description

Reiner and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 7 inches; fine sandy loam
H2--7 to 17 inches; clay loam
H3--17 to 60 inches; loam

672--Willosippi Loam

Component Description

Willosippi and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 13 inches; fine sandy loam
H3--13 to 28 inches;
H4--28 to 60 inches;

709B--Lengby Fine Sandy Loam, 2 To 8 Percent Slopes

Component Description

Lengby and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 11 inches; loamy fine sand
H3--11 to 26 inches; sandy clay loam
H4--26 to 48 inches;
H5--48 to 60 inches;

709C--Lengby Fine Sandy Loam, 8 To 15 Percent Slopes

Component Description

Lengby and similar soils
Extent: 90 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 15 inches; loamy fine sand
H3--15 to 29 inches; sandy clay loam
H4--29 to 42 inches;
H5--42 to 60 inches;

709E--Lengby Fine Sandy Loam, 15 To 30 Percent Slopes

Component Description

Lengby and similar soils
Extent: 90 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 12 inches; loamy fine sand
H3--12 to 32 inches; sandy clay loam
H4--32 to 40 inches;
H5--40 to 60 inches;

712--Rosewood Fine Sandy Loam

Component Description

Rosewood and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None

Available water capacity to a depth of 60 inches: 5.4 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 8 inches; fine sandy loam
H2--8 to 17 inches; fine sandy loam
H3--17 to 60 inches; sand

713--Linveldt Fine Sandy Loam

Component Description

Linveldt and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 9 inches; fine sandy loam
H2--9 to 16 inches; sandy loam
H3--16 to 28 inches; loamy sand
H4--28 to 60 inches; loam

718B--Naytahwaush Loam, 2 To 8 Percent Slopes

Component Description

Naytahwaush and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 3 inches; loam
H2--3 to 9 inches; fine sandy loam
H3--9 to 25 inches; clay
H4--25 to 60 inches; clay loam

718C--Naytahwaush Loam, 8 To 15 Percent Slopes

Component Description

Naytahwaush and similar soils
Extent: 90 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 3 inches; loam
H2--3 to 9 inches; fine sandy loam
H3--9 to 26 inches; clay
H4--26 to 60 inches; clay loam

718E--Naytahwaush Loam, 15 To 30 Percent Slopes

Component Description

Naytahwaush and similar soils
Extent: 90 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 3 inches; loam
H2--3 to 8 inches; fine sandy loam
H3--8 to 24 inches; clay
H4--24 to 60 inches; clay loam

733--Berner Muck

Component Description

Berner and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.2 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 16.1 inches
Content of organic matter in the upper 10 inches: 87.5 percent
Typical profile:
H1--0 to 28 inches; muck
H2--28 to 31 inches; sandy loam
H3--31 to 44 inches; sand
H4--44 to 60 inches; loam

737--Mahkonce Loam

Component Description

Mahkonce and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May June
Wet soil moisture status is lowest (depth, months):
3.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 9 inches; fine sandy loam
H3--9 to 26 inches; clay
H4--26 to 60 inches; clay loam

746--Haslie Muck

Component Description

Haslie and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.2 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 19.7 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 15 inches; muck
H2--15 to 34 inches; muck
H3--34 to 60 inches; coprogenous earth

765--Smiley Loam

Component Description

Smiley and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 15 inches; clay loam
H3--15 to 60 inches; loam

767--Auganaush Loam

Component Description

Auganaush and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 9 inches; fine sandy loam
H3--9 to 25 inches; clay
H4--25 to 60 inches; clay loam

775B--Sugarbush-Two Inlets Complex, 1 To 8 Percent Slopes

Component Description

Sugarbush and similar soils
Extent: 55 percent of the unit
Slope range: 1 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 14 inches; loamy coarse sand
H3--14 to 26 inches; coarse sandy loam
H4--26 to 60 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 35 percent of the unit
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 15 inches; loamy coarse sand
H3--15 to 30 inches; gravelly loamy coarse sand
H4--30 to 60 inches; gravelly coarse sand

775C--Sugarbush-Two Inlets Complex, 8 To 15 Percent Slopes

Component Description

Sugarbush and similar soils
Extent: 50 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 14 inches; loamy coarse sand
H3--14 to 27 inches; coarse sandy loam
H4--27 to 60 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 40 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 12 inches; loamy coarse sand
H3--12 to 32 inches; gravelly loamy coarse sand

H4--32 to 60 inches; gravelly coarse sand

776B--Snellman-Sugarbush Complex, 2 To 8 Percent Slopes

Component Description

Snellman and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 4 inches; sandy loam
H2--4 to 17 inches; loamy sand
H3--17 to 38 inches; sandy clay loam
H4--38 to 60 inches; fine sandy loam

Sugarbush and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; sandy loam
H2--3 to 12 inches; loamy coarse sand
H3--12 to 25 inches; coarse sandy loam
H4--25 to 60 inches; gravelly coarse sand

776C--Snellman-Sugarbush Complex, 8 To 15 Percent Slopes

Component Description

Snellman and similar soils
Extent: 60 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 4 inches; sandy loam
H2--4 to 12 inches; loamy sand
H3--12 to 32 inches; sandy clay loam
H4--32 to 60 inches; fine sandy loam

Sugarbush and similar soils
Extent: 30 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 4 inches; sandy loam

H2--4 to 17 inches; loamy coarse sand
H3--17 to 30 inches; coarse sandy loam
H4--30 to 60 inches; gravelly coarse sand

776E--Snellman-Sugarbush Complex, 15 To 30 Percent Slopes

Component Description

Snellman and similar soils
Extent: 55 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 3 inches; sandy loam
H2--3 to 16 inches; loamy sand
H3--16 to 34 inches; sandy clay loam
H4--34 to 60 inches; fine sandy loam

Sugarbush and similar soils
Extent: 35 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 16 inches; loamy coarse sand
H3--16 to 29 inches; coarse sandy loam
H4--29 to 60 inches; gravelly coarse sand

776F--Snellman-Sugarbush Complex, 30 To 45 Percent Slopes

Component Description

Snellman and similar soils
Extent: 50 percent of the unit
Slope range: 30 to 45 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 12 inches; loamy sand
H3--12 to 28 inches; sandy clay loam
H4--28 to 60 inches; fine sandy loam

Sugarbush and similar soils
Extent: 40 percent of the unit
Slope range: 30 to 45 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 0.9 percent

Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 14 inches; loamy coarse sand
H3--14 to 26 inches; coarse sandy loam
H4--26 to 60 inches; gravelly coarse sand

797--Mooselake And Lupton Soils

Component Description

Lupton and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August September
Ponding: None
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 80.0 percent
Typical profile:
H1--0 to 14 inches; muck
H2--14 to 60 inches;

Mooselake and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May June July October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot August September
Ponding is shallowest (depth, months):
0.5 foot January September December
Ponding is deepest (depth, months):
1.0 foot February March April May June July August October November
Available water capacity to a depth of 60 inches: 26.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 15 inches; muck
H2--15 to 60 inches; mucky peat

799--Seelyeville And Bowstring Soils, Frequently Flooded

Component Description

Bowstring and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding is least likely (frequency, months):
Rare January February August September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May June July October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot September
Ponding: At 0.5 foot all year

Available water capacity to a depth of 60 inches: 22.8 inches
Content of organic matter in the upper 10 inches: 65.0 percent
Typical profile:
H1--0 to 32 inches; muck
H2--32 to 36 inches;
H3--36 to 60 inches; muck

Seelyeville and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding is least likely (frequency, months):
Rare January February August
September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
1.0 foot September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 60 inches; muck

867B--Graycalm-Menahga Complex, 1 To 8 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 60 percent of the unit
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 32 inches; sand
H3--32 to 42 inches; sand
H4--42 to 60 inches; sand

Menahga and similar soils
Extent: 30 percent of the unit
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 24 inches; sand
H3--24 to 60 inches; sand

867C--Graycalm-Menahga Complex, 8 To 15 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 60 percent of the unit
Slope range: 8 to 15 percent

Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 28 inches; sand
H3--28 to 55 inches; sand
H4--55 to 60 inches; sand

Menahga and similar soils
Extent: 30 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 28 inches; sand
H3--28 to 60 inches; sand

867E--Graycalm-Menahga Complex, 15 To 30 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 60 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 26 inches; sand
H3--26 to 42 inches; sand
H4--42 to 60 inches; sand

Menahga and similar soils
Extent: 30 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 30 inches; sand
H3--30 to 60 inches; sand

1030--Pits, Gravel-Udipsamments Complex

Component Description

Pits
Extent: 45 percent of the unit
Slope range: 0 to 50 percent

Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None

Udipsamments and similar soils
Extent: 45 percent of the unit
Slope range: 1 to 50 percent
Surface layer texture: Sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.2 percent
Typical profile:
H1--0 to 14 inches; sand
H2--14 to 60 inches; sand
H3--60 to 80 inches; coarse sand

1113--Haslie, Seelyeville, And Cathro Soils, Ponded

Component Description

Cathro and similar soils
Extent: 30 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March September
November December
Ponding is deepest (depth, months):
1.5 feet April May June July August
October
Available water capacity to a depth of 60 inches: 18.2 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
H1--0 to 12 inches; muck
H2--12 to 30 inches; muck
H3--30 to 60 inches; clay loam

Haslie and similar soils
Extent: 30 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March September
November December
Ponding is deepest (depth, months):
1.5 feet April May June July August
October
Available water capacity to a depth of 60 inches: 18.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 28 inches; muck
H3--28 to 60 inches; coprogenous earth

Seelyeville and similar soils
Extent: 30 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):

1.0 foot January February March September
November December
Ponding is deepest (depth, months):
1.5 feet April May June July August
October
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 15 inches; muck
H2--15 to 60 inches; muck

1147--Fordum, Fairdale And Lamoure Soils, Frequently Flooded

Component Description

Fairdale and similar soils
Extent: 30 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
3.0 feet March April May June
Wet soil moisture status is lowest (depth, months):
4.0 feet January February August
September December
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 4.3 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 60 inches;

Fordum and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding is least likely (frequency, months):
Rare January February September
December
Flooding is most likely (frequency, months):
Frequent April May June October November
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.2 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 7.4 percent
Typical profile:
H1--0 to 6 inches; silt loam
H2--6 to 30 inches; very fine sandy loam
H3--30 to 60 inches; sand

Lamoure and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):

January February December
        Flooding is most likely (frequency, months):
Frequent   March April May June July August
  September October
        Wet soil moisture status is highest (depth, months):
At the surface   March April May June
        Wet soil moisture status is lowest (depth, months):
2.0 feet   September
        Ponding: None
        Available water capacity to a depth of 60 inches: 11.4 inches
        Content of organic matter in the upper 10 inches: 6.0 percent
        Typical profile:
H1--0 to 24 inches; silt loam
H2--24 to 38 inches; silty clay loam
H3--38 to 50 inches; loam
H4--50 to 60 inches;

1152B--Sugarbush Loamy Sand, 1 To 8 Percent Slopes

  Component Description

     Sugarbush and similar soils
        Extent: 90 percent of the unit
        Slope range: 1 to 8 percent
        Surface layer texture: Loamy sand
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Flooding: None
        Depth to wet soil moisture status: More than 6.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 4.1 inches
        Content of organic matter in the upper 10 inches: 0.8 percent
        Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 14 inches; loamy sand
H3--14 to 22 inches; coarse sandy loam
H4--22 to 60 inches; gravelly sand

1152C--Sugarbush Loamy Sand, 8 To 15 Percent Slopes

  Component Description

     Sugarbush and similar soils
        Extent: 90 percent of the unit
        Slope range: 8 to 15 percent
        Surface layer texture: Loamy sand
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Flooding: None
        Depth to wet soil moisture status: More than 6.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 3.8 inches
        Content of organic matter in the upper 10 inches: 0.8 percent
        Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 12 inches; loamy sand
H3--12 to 18 inches; coarse sandy loam
H4--18 to 60 inches; gravelly sand

1152E--Sugarbush Loamy Sand, 15 To 30 Percent Slopes

  Component Description

     Sugarbush and similar soils
        Extent: 90 percent of the unit
        Slope range: 15 to 30 percent
        Surface layer texture: Loamy sand
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Flooding: None
        Depth to wet soil moisture status: More than 6.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 4.1 inches
        Content of organic matter in the upper 10 inches: 0.7 percent

Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 9 inches; loamy sand
H3--9 to 20 inches; coarse sandy loam
H4--20 to 60 inches; gravelly sand

1164--Zerkel Loam

Component Description

Zerkel and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 10 inches; very fine sandy loam
H3--10 to 29 inches; loam
H4--29 to 60 inches;
H5--37 to 80 inches;

1166B--Moosecreek Fine Sandy Loam, 2 To 8 Percent Slopes

Component Description

Moosecreek and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 6 inches; fine sandy loam
H2--6 to 9 inches; fine sandy loam
H3--9 to 21 inches; loam
H4--21 to 60 inches; gravelly coarse sand

1191--Sahkahtay Sandy Loam

Component Description

Sahkahtay and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 4 inches; sandy loam
H2--4 to 14 inches; sand
H3--14 to 23 inches; gravelly sandy clay loam

H4--23 to 60 inches; gravelly coarse sand

1200--Egglake Loam

Component Description

Egglake and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 14 inches; fine sandy loam
H3--14 to 34 inches; loam
H4--34 to 60 inches; fine sandy loam

1238E--Two Inlets-Sugarbush Complex, 15 To 30 Percent Slopes

Component Description

Two inlets and similar soils
Extent: 55 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 13 inches; loamy coarse sand
H3--13 to 25 inches; gravelly loamy coarse sand
H4--25 to 60 inches; gravelly coarse sand

Sugarbush and similar soils
Extent: 35 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; sandy loam
H2--3 to 15 inches; loamy coarse sand
H3--15 to 28 inches; coarse sandy loam
H4--28 to 60 inches; gravelly coarse sand

1238F--Two Inlets-Sugarbush Complex, 30 To 45 Percent Slopes

Component Description

Two inlets and similar soils
Extent: 55 percent of the unit
Slope range: 30 to 45 percent
Surface layer texture: Loamy sand

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
H1--0 to 3 inches; loamy sand
H2--3 to 11 inches; loamy coarse sand
H3--11 to 25 inches; gravelly loamy coarse sand
H4--25 to 60 inches; gravelly coarse sand

Sugarbush and similar soils
Extent: 35 percent of the unit
Slope range: 30 to 45 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 14 inches; loamy coarse sand
H3--14 to 29 inches; coarse sandy loam
H4--29 to 60 inches; gravelly coarse sand

1244B--Sol-Sugarbush Complex, 2 To 8 Percent Slopes, Very Stony

Component Description

Sol and similar soils
Extent: 65 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 4 inches; sandy loam
H2--4 to 17 inches; loamy sand
H3--17 to 43 inches; sandy clay loam
H4--43 to 60 inches; fine sandy loam

Sugarbush and similar soils
Extent: 25 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 3 inches; sandy loam
H2--3 to 12 inches; loamy coarse sand
H3--12 to 25 inches; coarse sandy loam
H4--25 to 60 inches; gravelly sand

1244C--Sol-Sugarbush Complex, 8 To 15 Percent Slopes, Very Stony

Component Description

Sol and similar soils
Extent: 60 percent of the unit

Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 16 inches; loamy sand
H3--16 to 38 inches; sandy clay loam
H4--38 to 60 inches; fine sandy loam

Sugarbush and similar soils
Extent: 30 percent of the unit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 18 inches; loamy coarse sand
H3--18 to 26 inches; coarse sandy loam
H4--26 to 60 inches; gravelly sand

1244E--Sol-Sugarbush Complex, 15 To 30 Percent Slopes, Very Stony

Component Description

Sol and similar soils
Extent: 55 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 19 inches; loamy sand
H3--19 to 42 inches; sandy clay loam
H4--42 to 60 inches; fine sandy loam

Sugarbush and similar soils
Extent: 35 percent of the unit
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 17 inches; loamy coarse sand
H3--17 to 25 inches; coarse sandy loam
H4--25 to 60 inches; gravelly sand

1244F--Sol-Sugarbush Complex, 30 To 45 Percent Slopes, Very Stony

Component Description

Sol and similar soils
Extent: 55 percent of the unit
Slope range: 30 to 45 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 18 inches; loamy sand
H3--18 to 46 inches; sandy clay loam
H4--46 to 60 inches; fine sandy loam

Sugarbush and similar soils
Extent: 35 percent of the unit
Slope range: 30 to 45 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 2 inches; sandy loam
H2--2 to 16 inches; loamy coarse sand
H3--16 to 24 inches; coarse sandy loam
H4--24 to 60 inches; gravelly sand

1272B--Sol Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Sol and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 14 inches; fine sandy loam
H3--14 to 38 inches; sandy clay loam
H4--38 to 60 inches; fine sandy loam

1272C--Sol Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Sol and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 14 inches; fine sandy loam
H3--14 to 40 inches; sandy clay loam

H4--40 to 60 inches; fine sandy loam

1294--Nary Fine Sandy Loam

Component Description

Nary and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 3 inches; fine sandy loam
H2--3 to 15 inches; loamy fine sand
H3--15 to 36 inches; sandy clay loam
H4--36 to 60 inches; sandy loam

1325--Bowstring-Fluvaquents Complex, Frequently Flooded

Component Description

Bowstring and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding is least likely (frequency, months):
Rare January February August
September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
1.0 foot September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 20.4 inches
Content of organic matter in the upper 10 inches: 65.0 percent
Typical profile:
H1--0 to 19 inches; muck
H2--19 to 31 inches;
H3--31 to 60 inches; muck

Fluvaquents and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding is least likely (frequency, months):
Rare January February August
September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
1.0 foot September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 7.3 percent

Typical profile:
H1--0 to 8 inches; fine sandy loam
H3--8 to 60 inches;

1808--Markey Muck, Ponded

Component Description

Markey and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March September November December
Ponding is deepest (depth, months):
1.5 feet April May June July August October
Available water capacity to a depth of 60 inches: 13.1 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 28 inches; muck
H2--28 to 60 inches; fine sand

1874--Radium Loamy Sand

Component Description

Radium and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 11 inches; loamy sand
H2--11 to 16 inches; loamy sand
H3--16 to 60 inches; sand

1878--Hamre Muck

Component Description

Hamre and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 13.1 inches
Content of organic matter in the upper 10 inches: 90.0 percent
Typical profile:

H1--0 to 10 inches; muck
H2--10 to 14 inches; loam
H3--14 to 60 inches; loam

1943--Roscommon Loamy Sand

Component Description

Roscommon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April May June
Wet soil moisture status is lowest (depth, months):
3.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 5 inches; loamy sand
H2--5 to 60 inches; sand

W--Water

Additional Components

Water: 90 percent of the unit

21A HERMANTOWN LOAM

Hermantown soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The land capability classification is 2w. This soil is not hydric.

21B AHMEEK LOAM, 2 TO 6 PERCENT SLOPES

Ahmeek soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 2 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

21BC AHMEEK LOAM, 2 TO 12 PERCENT SLOPES

Ahmeek soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 2 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

21C AHMEEK LOAM, 6 TO 12 PERCENT SLOPES

Ahmeek soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 2 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

21D AHMEEK LOAM, 12 TO 18 PERCENT SLOPES

Ahmeek soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 2 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

21DE AHMEEK LOAM, 12 TO 25 PERCENT SLOPES

Ahmeek soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 2 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

21E AHMEEK LOAM, 18 TO 25 PERCENT SLOPES

Ahmeek soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 2 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

21F AHMEEK LOAM, 25 TO 40 PERCENT SLOPES

Ahmeek soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 2 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

22 ALLENDALE LOAMY SAND

Allendale soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loamy sand about 10 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 12 inches. The soil contains a maximum amount of 10 percent calcium carbonate. The land capability classification is . This soil is not hydric.

254B HIBBING LOAM, 2 TO 6 PERCENT SLOPES

Hibbing soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

254BC HIBBING LOAM, 2 TO 12 PERCENT SLOPES

Hibbing soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

254C HIBBING LOAM, 6 TO 12 PERCENT SLOPES

Hibbing soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

254D HIBBING LOAM, 12 TO 18 PERCENT SLOPES

Hibbing soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

254DE HIBBING LOAM, 12 TO 25 PERCENT SLOPES

Hibbing soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

254E HIBBING LOAM, 18 TO 25 PERCENT SLOPES

Hibbing soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

254F HIBBING LOAM, 25 TO 40 PERCENT SLOPES

Hibbing soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

274 NEWSON LOAMY SAND

Newson soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

303A ONTONAGON SILTY CLAY, 0 TO 2 PERCENT SLOPES

Ontonagon soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3s. This soil is not hydric.

303B ONTONAGON SILTY CLAY, 2 TO 6 PERCENT SLOPES

Ontonagon soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

303BC ONTONAGON SILTY CLAY, 2 TO 12 PERCENT SLOPES

Ontonagon soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

303C ONTONAGON SILTY CLAY, 6 TO 12 PERCENT SLOPES

Ontonagon soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

303D ONTONAGON SILTY CLAY, 12 TO 18 PERCENT SLOPES

Ontonagon soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 4e. This soil is not hydric.

303DE ONTONAGON SILTY CLAY, 12 TO 25 PERCENT SLOPES

Ontonagon soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal

high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

303E ONTONAGON SILTY CLAY, 18 TO 25 PERCENT SLOPES

Ontonagon soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

303F ONTONAGON SILTY CLAY, 25 TO 40 PERCENT SLOPES

Ontonagon soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 7e. This soil is not hydric.

305 BERGLAND CLAY

Bergland soil makes up 100 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is clay about 8 inches thick. This soil is very deep and poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 5w. This soil is hydric.

355A CLOQUET FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES

Cloquet soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine sandy loam about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3s. This soil is not hydric.

355B CLOQUET FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES

Cloquet soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine sandy loam about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

355BC CLOQUET FINE SANDY LOAM, 2 TO 12 PERCENT SLOPES

Cloquet soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine sandy loam about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

355C CLOQUET FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES

Cloquet soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine sandy loam about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

355D CLOQUET FINE SANDY LOAM, 12 TO 18 PERCENT SLOPES

Cloquet soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine

sandy loam about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

355DE CLOQUET FINE SANDY LOAM, 12 TO 25 PERCENT SLOPES

Cloquet soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

355E CLOQUET FINE SANDY LOAM, 18 TO 25 PERCENT SLOPES

Cloquet soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine sandy loam about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

355F CLOQUET FINE SANDY LOAM, 25 TO 40 PERCENT SLOPES

Cloquet soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine sandy loam about 8 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

407 BRIMSON LOAM, RUBBLY

Brimson soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is stony loam about 5 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 18 inches. The land capability classification is 6s. This soil is not hydric.

420 TWIG MUCK

Twig soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is muck about 12 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 7w. This soil is hydric.

502 DUSLER SILT LOAM

Dusler soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 2w. This soil is not hydric.

504A DUSLER VERY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES

Dusler soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is very fine sandy loam about 4 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 2w. This soil is not hydric.

504B DULUTH VERY FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES

Duluth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is very fine sandy loam about 4 inches thick. This soil is very deep and moderately well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 57 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 2e. This soil is not hydric.

504BC DULUTH VERY FINE SANDY LOAM, 2 TO 12 PERCENT SLOPES

Duluth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is very fine sandy loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

504C DULUTH VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES

Duluth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is very fine sandy loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

504D DULUTH VERY FINE SANDY LOAM, 12 TO 18 PERCENT SLOPES

Duluth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is very fine sandy loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

504DE DULUTH VERY FINE SANDY LOAM, 12 TO 25 PERCENT SLOPES

Duluth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is very fine sandy loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

504E DULUTH VERY FINE SANDY LOAM, 18 TO 25 PERCENT SLOPES

Duluth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

504F DULUTH VERY FINE SANDY LOAM, 25 TO 40 PERCENT SLOPES

Duluth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is very fine sandy loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 7e. This soil is not hydric.

512A AMASA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES

Amasa soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine sandy loam about 3 inches thick. This soil is very deep and well drained. The surface layer has

a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2s. This soil is not hydric.

512B AMASA FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES

Amasa soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 3 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

512C AMASA FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES

Amasa soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 3 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

515A NEWFOUND GRAVELLY SANDY LOAM, 0 TO 2 PERCENT SLOPES

Newfound soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 16 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

515B NEWFOUND GRAVELLY SANDY LOAM, 2 TO 6 PERCENT SLOPES

Newfound soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 16 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

515BE NEWFOUND GRAVELLY SANDY LOAM, 2 TO 12 PERCENT SLOPES

Newfound soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 16 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

515C NEWFOUND GRAVELLY SANDY LOAM, 6 TO 12 PERCENT SLOPES

Newfound soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 16 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

515D NEWFOUND GRAVELLY SANDY LOAM, 12 TO 20 PERCENT SLOPES

Newfound soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 16 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

515DE NEWFOUND GRAVELLY SANDY LOAM, 12 TO 25 PERCENT SLOPES

Newfound soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 16 inches thick. This soil is very deep and well drained. The surface layer

has a moderately low content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

515EF NEWFOUND GRAVELLY SANDY LOAM, 18 TO 35 PERCENT SLOPES

Newfound soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 16 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

515F NEWFOUND GRAVELLY SANDY LOAM, 25 TO 40 PERCENT SLOPES

Newfound soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 16 inches thick. This soil is very deep and well drained. The surface layer has a moderately low content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

530 GREENWOOD MUCKY PEAT

Greenwood soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is mucky peat about 6 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The land capability classification is 7w. This soil is hydric.

531 BESEMAN MUCK

Beseman soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 8 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is slow. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 7w. This soil is hydric.

534 MOOSELAKE MUCKY PEAT

Mooselake soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is mucky peat about 6 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

540 SEELYEVILLE MUCK

Seelyeville soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is muck about 10 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. It has a very high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

555AD BARTO GRAVELLY LOAM, 0 TO 18 PERCENT SLOPES

Barto soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly loam about 8 inches thick. This soil is shallow and well drained. The surface layer has a high content of organic matter. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

556AD INSULA GRAVELLY SANDY LOAM, 0 TO 18 PERCENT SLOPES

Insula soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 3 inches thick. This soil is shallow and well drained. The surface layer has a

content of organic matter. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

556DE INSULA GRAVELLY SANDY LOAM, 12 TO 25 PERCENT SLOPES

Insula soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 3 inches thick. This soil is shallow and well drained. The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

557AD CONIC GRAVELLY SANDY LOAM, 0 TO 18 PERCENT SLOPES

Conic soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 15 inches thick. This soil is moderately deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

557DF CONIC GRAVELLY SANDY LOAM, 12 TO 35 PERCENT SLOPES

Conic soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly sandy loam about 15 inches thick. This soil is moderately deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

685 OESTERLE FINE SANDY LOAM

Oesterle soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is fine sandy loam about 7 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The land capability classification is 2w. This soil is not hydric.

695B FINLAND LOAM, 2 TO 6 PERCENT SLOPES

Finland soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. This soil is not hydric.

695C FINLAND LOAM, 6 TO 12 PERCENT SLOPES

Finland soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

695D FINLAND LOAM, 12 TO 18 PERCENT SLOPES

Finland soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. This soil is not hydric.

695E FINLAND LOAM, 18 TO 25 PERCENT SLOPES

Finland soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate

content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

695F FINLAND LOAM, 25 TO 40 PERCENT SLOPES

Finland soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is very deep and well drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

696 HERMANTOWN SILT LOAM

Hermantown soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is silt loam about 4 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The land capability classification is 2w. This soil is not hydric.

697B TOIMI SANDY LOAM, 2 TO 6 PERCENT SLOPES

Toimi soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is sandy loam about 4 inches thick. This soil is very deep and moderately well drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The land capability classification is 3e. This soil is not hydric.

697C TOIMI SANDY LOAM, 6 TO 12 PERCENT SLOPES

Toimi soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is sandy loam about 4 inches thick. This soil is very deep and moderately well drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The land capability classification is 6e. This soil is not hydric.

697D TOIMI SANDY LOAM, 12 TO 18 PERCENT SLOPES

Toimi soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is sandy loam about 4 inches thick. This soil is very deep and moderately well drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The land capability classification is 6e. This soil is not hydric.

714 BUHL LOAM

Buhl soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is loam about 11 inches thick. This soil is very deep and somewhat poorly drained. The surface layer has a moderate content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The land capability classification is 3w. This soil is hydric.

890B BARTO-MESABA COMPLEX, 2 TO 6 PERCENT SLOPES

Barto soil makes up 50 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly loam about 8 inches thick. This soil is shallow and well drained. The surface layer has a high content of organic matter. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

Mesaba soil makes up 40 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is moderately deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not

ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

890BD BARTO-MESABA COMPLEX, 2 TO 18 PERCENT SLOPES

Barto soil makes up 50 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly loam about 8 inches thick. This soil is shallow and well drained. The surface layer has a high content of organic matter. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. This soil is not hydric.

Mesaba soil makes up 40 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly loam about 4 inches thick. This soil is moderately deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

890EF BARTO-MESABA COMPLEX, 18 TO 35 PERCENT SLOPES

Barto soil makes up 50 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly loam about 8 inches thick. This soil is shallow and well drained. The surface layer has a high content of organic matter. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

Mesaba soil makes up 40 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 4 inches thick. This soil is moderately deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

952AD QUETICO-ROCK OUTCROP COMPLEX, 0 TO 18 PERCENT SLOPES

Quetico soil makes up 60 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 5 inches thick. This soil is shallow and somewhat excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

No description available.

952EF QUETICO-ROCK OUTCROP COMPLEX, 12 TO 40 PERCENT SLOPES

Quetico soil makes up 60 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly loam about 5 inches thick. This soil is shallow and somewhat excessively drained. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

No description available.

980 BLACKHOOF AND MAHTOWA SOILS

Blackhoof soil makes up 50 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is muck about 11 inches thick. This soil is very deep and very poorly drained. The surface layer has a very high content of organic matter. The slowest permeability is impermeable. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 6w. This soil is hydric.

Mahtowa soil makes up 50 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 12 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is slow. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification

is 5w. This soil is hydric.

995 BOROSAPRISTS UNDIFFERENTIATED

Borosaprists soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about This soil is very deep and . The surface layer has a content of organic matter. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is . This soil is hydric.

1001 ALLUVIAL LAND, OCCASIONALLY FLOODED

Alluvial Land soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 60 inches thick. This soil is very deep and moderately well drained. The surface layer has a content of organic matter. It has a high available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 42 inches. The land capability classification is 2w. This soil is not hydric.

1002 ALLUVIAL LAND, FREQUENTLY FLOODED

Alluvial Land soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 16 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. The land capability classification is 8w. This soil is hydric.

1020F UDORTHENTS, VERY STEEP

No description available.

1022 DUMPS

No description available.

1334B EVELETH STONY LOAM, 2 TO 6 PERCENT SLOPES

Eveleth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is --- about 3 inches thick. This soil is very deep and moderately well drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 33 inches. The land capability classification is 6s. This soil is not hydric.

1334C EVELETH STONY LOAM, 6 TO 12 PERCENT SLOPES

Eveleth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is stony loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

1335B EVELETH STONY LOAM, 2 TO 12 PERCENT SLOPES

Eveleth soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is stony loam about 3 inches thick. This soil is very deep and well drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

1336 BUGCREEK STONY LOAM

Bugcreek soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is stony loam about 6 inches thick. This soil is very deep and very poorly drained. The surface layer has a high content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The land capability classification is 6w. This soil is hydric.

1340A ONTONAGON-OMEGA COMPLEX, 0 TO 2 PERCENT SLOPES

Ontonagon soil makes up 50 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3s. This soil is not hydric.

Omega soil makes up 40 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is --- about 12 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

1340B ONTONAGON-OMEGA COMPLEX, 2 TO 6 PERCENT SLOPES

Ontonagon soil makes up 50 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

Omega soil makes up 40 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is loamy fine sand about 12 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

1340C ONTONAGON-OMEGA COMPLEX, 6 TO 12 PERCENT SLOPES

Ontonagon soil makes up 50 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is --- about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 3e. This soil is not hydric.

Omega soil makes up 40 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is loamy fine sand about 12 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. This soil is not hydric.

1340D ONTONAGON-OMEGA COMPLEX, 12 TO 18 PERCENT SLOPES

Ontonagon soil makes up 50 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 4e. This soil is not hydric.

Omega soil makes up 40 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is --- about 12 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. This soil is not hydric.

1340E ONTONAGON-OMEGA COMPLEX, 18 TO 25 PERCENT SLOPES

Ontonagon soil makes up 50 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity

and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 6e. This soil is not hydric.

Omega soil makes up 40 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is loamy fine sand about 12 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7s. This soil is not hydric.

1340F ONTONAGON-OMEGA COMPLEX, 25 TO 40 PERCENT SLOPES

Ontonagon soil makes up 50 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is silty clay about 7 inches thick. This soil is very deep and well drained. The surface layer has a content of organic matter. The slowest permeability is impermeable. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 25 percent calcium carbonate. The land capability classification is 7e. This soil is not hydric.

Omega soil makes up 40 percent of the map unit. This map unit is in the Superior Lake Plain Major Land Resource Area. Typically the surface layer is loamy fine sand about 12 inches thick. This soil is very deep and somewhat excessively drained. The surface layer has a moderately low content of organic matter. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. This soil is not hydric.

1823 MESABA VARIANT, 2 TO 12 PERCENT SLOPES

Mesaba Variant soil makes up 100 percent of the map unit. This map unit is in the Superior Stony and Rocky Loamy Plains and Hills Major Land Resource Area. Typically the surface layer is gravelly loam about 42 inches thick. This soil is deep and well drained. The surface layer has a content of organic matter. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. This soil is not hydric.

CW CENSUS WATER

No description available.

Cottonwood County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Crow Wing County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

2B--Ostrander Loam, 1 To 6 Percent Slopes

Component Description

Ostrander and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; loam
2Bw--17 to 53 inches; loam
2C--53 to 60 inches; loam

2C--Ostrander Loam, 6 To 12 Percent Slopes

Component Description

Ostrander and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; loam
2Bw--17 to 53 inches; loam
2C--53 to 60 inches; loam

7A--Hubbard Loamy Sand, 0 To 1 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A1,A2--0 to 16 inches; loamy sand
BA,Bw--16 to 38 inches; loamy sand
C--38 to 60 inches; sand

7B--Hubbard Loamy Sand, 1 To 6 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A1,A2--0 to 16 inches; loamy sand
BA,Bw--16 to 38 inches; loamy sand
C--38 to 60 inches; sand

7C--Hubbard Loamy Sand, 6 To 12 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A1,A2--0 to 16 inches; loamy sand
BA,Bw--16 to 38 inches; loamy sand
C--38 to 60 inches; sand

7D--Hubbard Loamy Sand, 12 To 18 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 12 to 18 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A1,A2--0 to 16 inches; loamy sand
BA,Bw--16 to 38 inches; loamy sand
C--38 to 60 inches; sand

8A--Sparta Loamy Fine Sand, 0 To 1 Percent Slopes

Component Description

Sparta and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A--0 to 10 inches; loamy fine sand
Bw--10 to 25 inches; fine sand
C--25 to 60 inches; fine sand

8B--Sparta Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Sparta and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,AB--0 to 10 inches; loamy fine sand
Bw--10 to 25 inches; fine sand
C--25 to 60 inches; fine sand

12C--Emmert Very Gravelly Sandy Loam, 3 To 15 Percent Slopes

Component Description

Emmert and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 3 to 15 percent
Surface layer texture: Very gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.2 inches
Content of organic matter in the upper 10 inches: 0.4 percent

Typical profile:
A--0 to 4 inches; very gravelly sandy loam
BA,Bw,C--4 to 60 inches; very gravelly sand

27A--Dickinson Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A,AB--0 to 16 inches; sandy loam
Bw,BC--16 to 36 inches; sandy loam
C--36 to 60 inches; sand

27B--Dickinson Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A,AB--0 to 16 inches; sandy loam
Bw,BC--16 to 36 inches; sandy loam
C--36 to 60 inches; sand

39A--Wadena Loam, 0 To 2 Percent Slopes

Component Description

Wadena and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A,AB--0 to 16 inches; loam
Bw--16 to 31 inches; loam

2BC,2C--31 to 60 inches; stratified gravelly coarse sand to sand

39B--Wadena Loam, 2 To 6 Percent Slopes

Component Description

Wadena and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A,AB--0 to 16 inches; loam
Bw--16 to 31 inches; loam
2BC,2C--31 to 60 inches; stratified gravelly coarse sand to sand

39B2--Wadena Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Wadena, eroded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 31 inches; loam
2C--31 to 60 inches; stratified gravelly coarse sand to sand

39C--Wadena Loam, 6 To 12 Percent Slopes

Component Description

Wadena and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 12 inches; loam
Bw--12 to 31 inches; loam
2C--31 to 60 inches; stratified gravelly coarse sand to sand

39C2--Wadena Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Wadena, eroded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 31 inches; loam
2C--31 to 60 inches; stratified gravelly coarse sand to sand

39D--Wadena Loam, 12 To 18 Percent Slopes

Component Description

Wadena and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 12 inches; loam
Bw--12 to 31 inches; loam
2C--31 to 60 inches; stratified gravelly coarse sand to sand

41A--Estherville Sandy Loam, 0 To 2 Percent Slopes

Component Description

Estherville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,AB--0 to 13 inches; sandy loam
Bw--13 to 21 inches; sandy loam
2BC,2C--21 to 60 inches; sand

41B--Estherville Sandy Loam, 2 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,AB--0 to 13 inches; sandy loam
Bw--13 to 21 inches; sandy loam
2BC,2C--21 to 60 inches; sand

42C--Salida Gravelly Coarse Sandy Loam, 2 To 12 Percent Slopes

Component Description

Salida and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 2 to 12 percent
Surface layer texture: Gravelly coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.4 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 8 inches; gravelly coarse sandy loam
Bw--8 to 14 inches; gravelly loamy coarse sand
C--14 to 60 inches; gravelly sand

49B--Antigo Silt Loam, 1 To 8 Percent Slopes

Component Description

Antigo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 1 to 8 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; silt loam
BA,Bw,Bt--8 to 24 inches; silt loam
2C--24 to 60 inches; sand

81B--Boone Loamy Fine Sand, 2 To 6 Percent Slopes

Component Description

Boone and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 2 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Bedrock (paralithic): 20 to 40 inches
Drainage class: Excessively drained
Parent material:
Siliceous sandy residuum
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 1.9 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
A--0 to 3 inches; loamy fine sand
AC--3 to 8 inches; loamy fine sand
C--8 to 24 inches; fine sand
Cr--24 to 60 inches; weathered bedrock

81C--Boone Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Boone and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Bedrock (paralithic): 20 to 40 inches
Drainage class: Excessively drained
Parent material:
Siliceous sandy residuum
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 1.9 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
A--0 to 3 inches; loamy fine sand
AC--3 to 8 inches; loamy fine sand
C--8 to 24 inches; fine sand
Cr--24 to 60 inches; weathered bedrock

81E--Boone Loamy Fine Sand, 12 To 40 Percent Slopes

Component Description

Boone and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 12 to 40 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Bedrock (paralithic): 20 to 40 inches
Drainage class: Excessively drained
Parent material:
Siliceous sandy residuum
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 1.9 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
A--0 to 3 inches; loamy fine sand
AC--3 to 8 inches; loamy fine sand
C--8 to 24 inches; fine sand
Cr--24 to 60 inches; weathered bedrock

94C--Terril Loam, 4 To 12 Percent Slopes

Component Description

Terril and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 4 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Colluvium
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
A1,A2,A3--0 to 36 inches; loam
Bw--36 to 48 inches; loam
C--48 to 60 inches; loam

98--Colo Silt Loam, Occasionally Flooded

Component Description

Colo, occasionally flooded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.3 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
A1,A2--0 to 20 inches; silt loam
A3,A4,A5,C--20 to 60 inches; silty clay loam

100A--Copaston Loam, 0 To 2 Percent Slopes

Component Description

Copaston and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 12 to 20 inches
Drainage class: Well drained
Parent material:
Alluvial sediment over bedrock
Flooding: None
Depth to wet soil moisture status: More than 1.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
A--0 to 6 inches; loam
BA,Bw--6 to 15 inches; loam
2R--15 to 60 inches; unweathered bedrock

100B--Copaston Loam, 2 To 6 Percent Slopes

Component Description

Copaston and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 12 to 20 inches
Drainage class: Well drained
Parent material:
Alluvial sediment over bedrock
Flooding: None
Depth to wet soil moisture status: More than 1.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
A--0 to 6 inches; loam
BA,Bw--6 to 15 inches; loam
2R--15 to 60 inches; unweathered bedrock

100C--Copaston Loam, 6 To 12 Percent Slopes

Component Description

Copaston and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 12 to 20 inches
Drainage class: Well drained
Parent material:
Alluvial sediment over bedrock
Flooding: None
Depth to wet soil moisture status: More than 1.2 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
A--0 to 6 inches; loam
BA,Bw--6 to 15 inches; loam
2R--15 to 60 inches; unweathered bedrock

106B--Lester Loam, 2 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
Ap--0 to 6 inches; loam
BA,Bt,Bw--6 to 38 inches; clay loam

C--38 to 60 inches; loam

106C--Lester Loam, 6 To 12 Percent Slopes

Component Description

Lester and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
Ap--0 to 6 inches; loam
BA,Bt,Bw--6 to 38 inches; clay loam
C--38 to 60 inches; loam

106C2--Lester Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 6 inches; loam
BA,Bt,Bw--6 to 38 inches; clay loam
C--38 to 60 inches; loam

106D2--Lester Loam, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 6 inches; loam
BA,Bt,Bw--6 to 38 inches; clay loam
C--38 to 60 inches; loam

109--Cordova Silty Clay Loam

Component Description

Cordova and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A,BA--0 to 20 inches; silty clay loam
Btg--20 to 34 inches; clay loam
C--34 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 14 inches; clay loam
Bg--14 to 30 inches; clay loam
Cg--30 to 60 inches; clay loam

114--Glencoe Silty Clay Loam

Component Description

Glencoe and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):

0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
A1,A2--0 to 21 inches; silty clay loam
A3--21 to 26 inches; clay loam
Bg--26 to 38 inches; clay loam
Cg--38 to 60 inches; clay loam

129--Cylinder Loam

Component Description

Cylinder and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.0 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 5.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,AB--0 to 12 inches; loam
Bw--12 to 25 inches; loam
2Bw,2C--25 to 60 inches; sand

150B--Spencer Silt Loam, 2 To 6 Percent Slopes

Component Description

Spencer and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Loess over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 7 inches; silt loam
E--7 to 13 inches; silt loam
Bt--13 to 35 inches; silt loam
Bw--35 to 45 inches; silt loam
2C--45 to 60 inches; sandy loam

151C--Burkhardt Sandy Loam, 6 To 12 Percent Slopes

Component Description

Burkhardt and similar soils
Extent: 100 percent of the unit
Geomorphic description:

Outwash plain
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A,AB--0 to 12 inches; sandy loam
Bw,BC--12 to 22 inches; sandy loam
2C--22 to 60 inches; stratified gravel to sand

151D--Burkhardt Sandy Loam, 12 To 18 Percent Slopes

Component Description

Burkhardt and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A,AB--0 to 12 inches; sandy loam
Bw,BC--12 to 22 inches; sandy loam
2C--22 to 60 inches; stratified gravel to sand

155B--Chetek Sandy Loam, 3 To 8 Percent Slopes

Component Description

Chetek and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Slope range: 3 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A,AB--0 to 7 inches; sandy loam
Bt--7 to 14 inches; loam
2Bt--14 to 24 inches; gravelly loamy sand
2C--24 to 60 inches; stratified very gravelly coarse sand to sand

155C--Chetek Sandy Loam, 8 To 15 Percent Slopes

Component Description

Chetek and similar soils
Extent: 100 percent of the unit
Geomorphic description:

Moraine
Outwash plain
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A,AB--0 to 7 inches; sandy loam
Bt--7 to 14 inches; loam
2Bt--14 to 24 inches; gravelly loamy sand
2C--24 to 60 inches; stratified very gravelly coarse sand to sand

155E--Chetek Sandy Loam, 15 To 25 Percent Slopes

Component Description

Chetek and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Moraine
Slope range: 15 to 25 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A,AB--0 to 7 inches; sandy loam
Bt--7 to 14 inches; loam
2Bt--14 to 24 inches; gravelly loamy sand
2C--24 to 60 inches; stratified very gravelly coarse sand to sand

173F--Frontenac Silt Loam, 25 To 40 Percent Slopes

Component Description

Frontenac and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 25 to 40 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Colluvial sediments over limestone residuum
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A,AB--0 to 11 inches; silt loam
Bw--11 to 24 inches; loam
2C--24 to 60 inches; flaggy loam

176--Garwin Silty Clay Loam

Component Description

Garwin and similar soils

Extent: 100 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Loess
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 14 inches; silty clay loam
Bwg--14 to 28 inches; silty clay loam
BCg,Cg--28 to 60 inches; silt loam

177A--Gotham Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Gotham and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Moraine
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 9 inches; loamy fine sand
BA--9 to 25 inches; loamy fine sand
Bw,Bt--25 to 48 inches; loamy fine sand
C--48 to 60 inches; fine sand

177B--Gotham Loamy Fine Sand, 2 To 6 Percent Slopes

Component Description

Gotham and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Stream terrace
Slope range: 2 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
BA--8 to 24 inches; loamy fine sand
Bw,Bt--24 to 47 inches; loamy fine sand
C--47 to 60 inches; fine sand

177C--Gotham Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Gotham and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Stream terrace
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 7 inches; loamy fine sand
BA--7 to 23 inches; loamy fine sand
Bw,Bt--23 to 46 inches; loamy fine sand
C--46 to 60 inches; fine sand

189--Auburndale Silt Loam

Component Description

Auburndale and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciofluvial sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
A1,A2--0 to 13 inches; silt loam
E1,E2--13 to 25 inches; silt loam
Btg--25 to 36 inches; silt loam
Cg--36 to 58 inches; loam
2C--58 to 60 inches; sandy loam

203B--Joy Silt Loam, 1 To 5 Percent Slopes

Component Description

Joy and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 1 to 5 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Loess

Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 13.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A,AB--0 to 23 inches; silt loam
Bw,BC--23 to 55 inches; silt loam
C--55 to 60 inches; silt loam

208--Kato Silty Clay Loam

Component Description

Kato and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,ABg--0 to 23 inches; silty clay loam
Bg--23 to 30 inches; silt loam
2BCg,2Cg--30 to 60 inches; sand

213B--Klinger Silt Loam, 1 To 5 Percent Slopes

Component Description

Klinger and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 1 to 5 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Loess over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 13 inches; silt loam
Bt--13 to 28 inches; loam
2Bt,2Bw,2C--28 to 60 inches; loam

226--Lawson Silt Loam

Component Description

Lawson and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain

Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2--0 to 15 inches; silt loam
AC--15 to 30 inches; silt loam
Cg--30 to 60 inches; silt loam

239--Le Sueur Loam

Component Description

Le sueur and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 10 inches; loam
Bt,BC--10 to 53 inches; clay loam
C--53 to 60 inches; loam

250--Kennebec Silt Loam

Component Description

Kennebec and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 13.4 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A1,A2--0 to 41 inches; silt loam
C--41 to 60 inches; silt loam

251D--Marlean Loam, 12 To 18 Percent Slopes

Component Description

Marlean and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loamy residuum over bedrock
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.0 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
A--0 to 5 inches; loam
Bw--5 to 11 inches; loam
2C--11 to 42 inches; very channery loam
2R--42 to 60 inches; unweathered bedrock

251E--Marlean Loam, 18 To 25 Percent Slopes

Component Description

Marlean and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loamy residuum over bedrock
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.0 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
A--0 to 5 inches; loam
Bw--5 to 11 inches; loam
2C--11 to 42 inches; very channery loam
2R--42 to 60 inches; unweathered bedrock

252--Marshan Silty Clay Loam

Component Description

Marshan and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat on outwash plain
Flat on stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine sediments over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent

Typical profile:
A1,A2--0 to 14 inches; silty clay loam
BA,Bg--14 to 32 inches; loam
2C--32 to 60 inches; sand

253--Maxcreek Silty Clay Loam

Component Description

Maxcreek and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; silty clay loam
Bg1,Bg2--17 to 30 inches; silty clay loam
2C--30 to 60 inches; loam

255--Mayer Silt Loam

Component Description

Mayer and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat on outwash plain
Flat on stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 17 inches; silt loam
Bg,BC--17 to 31 inches; loam
2C--31 to 60 inches; gravelly loamy sand

279B--Otterholt Silt Loam, 1 To 6 Percent Slopes

Component Description

Otterholt and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess over till

Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
A--0 to 2 inches; silt loam
E,BE--2 to 15 inches; silt loam
Bt--15 to 35 inches; silt loam
2C--35 to 60 inches; sandy loam

279C--Otterholt Silt Loam, 6 To 15 Percent Slopes

Component Description

Otterholt and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 6 to 15 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
A--0 to 2 inches; silt loam
E,BE--2 to 15 inches; silt loam
Bt--15 to 35 inches; silt loam
2C--35 to 60 inches; sandy loam

283A--Plainfield Loamy Sand, 0 To 2 Percent Slopes

Component Description

Plainfield and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 4 inches; loamy sand
Bw,BC,C--4 to 60 inches; sand

283B--Plainfield Loamy Sand, 2 To 6 Percent Slopes

Component Description

Plainfield and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:

Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 4 inches; loamy sand
Bw,BC,C--4 to 60 inches; sand

283D--Plainfield Loamy Sand, 6 To 18 Percent Slopes

Component Description

Plainfield and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 6 to 18 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 4 inches; loamy sand
Bw,BC,C--4 to 60 inches; sand

285A--Port Byron Silt Loam, 0 To 2 Percent Slopes

Component Description

Port byron and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A,AB--0 to 19 inches; silt loam
Bw--19 to 52 inches; silt loam
C--52 to 60 inches; silt loam

285B--Port Byron Silt Loam, 2 To 6 Percent Slopes

Component Description

Port byron and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 12.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A,AB--0 to 16 inches; silt loam
Bw--16 to 36 inches; silt loam
C--36 to 60 inches; silt loam

285C--Port Byron Silt Loam, 6 To 12 Percent Slopes

Component Description

Port byron and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A,AB--0 to 14 inches; silt loam
Bw--14 to 44 inches; silt loam
C--44 to 60 inches; silt loam

299A--Rockton Loam, 0 To 2 Percent Slopes

Component Description

Rockton and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (paralithic): 20 to 40 inches
Drainage class: Well drained
Parent material:
Alluvial sediments over bedrock
Flooding: None
Depth to wet soil moisture status: More than 2.9 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
A,AB--0 to 16 inches; loam
Bt--16 to 35 inches; clay loam
2R--35 to 60 inches; weathered bedrock

299B--Rockton Loam, 2 To 6 Percent Slopes

Component Description

Rockton and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (paralithic): 20 to 40 inches
Drainage class: Well drained
Parent material:
Alluvial sediments over bedrock
Flooding: None
Depth to wet soil moisture status: More than 2.9 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches

Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
A,AB--0 to 16 inches; loam
Bt--16 to 35 inches; clay loam
2R--35 to 60 inches; weathered bedrock

299C--Rockton Loam, 6 To 12 Percent Slopes

Component Description

Rockton and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (paralithic): 20 to 40 inches
Drainage class: Well drained
Parent material:
Alluvial sediments over bedrock
Flooding: None
Depth to wet soil moisture status: More than 2.9 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
A,AB--0 to 16 inches; loam
Bt--16 to 35 inches; clay loam
2R--35 to 60 inches; weathered bedrock

301B--Lindstrom Silt Loam, 1 To 4 Percent Slopes

Component Description

Lindstrom and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 1 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A,AB--0 to 34 inches; silt loam
Bw--34 to 60 inches; silt loam

313--Spillville Loam, Occasionally Flooded

Component Description

Spillville, occasionally flooded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):

More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2,A3--0 to 48 inches; loam
A4--48 to 60 inches; loam

317--Oshawa Silty Clay Loam

Component Description

Oshawa and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Oxbow on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March August
September October
Ponding is deepest (depth, months):
2.0 feet May June
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
Ag--0 to 37 inches; silty clay loam
Cg--37 to 60 inches; silty clay loam

318--Mayer Loam, Swales

Component Description

Mayer, swales and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression on stream terrace
Depression on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 19 inches; loam
Bg,BC--19 to 36 inches; loam
2C--36 to 60 inches; gravelly loamy sand

320B--Tallula Silt Loam, 2 To 6 Percent Slopes

Component Description

Tallula and similar soils

Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bw,BC--9 to 27 inches; silt loam
C--27 to 60 inches; silt loam

320C2--Tallula Silt Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Tallula, eroded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bw,BC--9 to 27 inches; silt loam
C--27 to 60 inches; silt loam

342B--Kingsley Sandy Loam, 3 To 8 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 3 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

342C--Kingsley Sandy Loam, 8 To 15 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 100 percent of the unit

Geomorphic description:
Moraine
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

342E--Kingsley Sandy Loam, 15 To 25 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 15 to 25 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

342F--Kingsley Sandy Loam, 25 To 40 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 25 to 40 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

344--Quam Silt Loam

Component Description

Quam and similar soils

Extent: 100 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
A1--0 to 12 inches; silt loam
A2,Ab--12 to 45 inches; silt loam
Cg--45 to 60 inches; silt loam

377B--Merton Silt Loam, 1 To 6 Percent Slopes

Component Description

Merton and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Loess over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,AB--0 to 15 inches; silt loam
2Bt--15 to 37 inches; loam
2BC,2C--37 to 60 inches; loam

378--Maxfield Silty Clay Loam

Component Description

Maxfield and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Loess over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:

Ap,A,AB--0 to 21 inches; silty clay loam
Bg--21 to 27 inches; silty clay loam
2B,2C--27 to 60 inches; loam

382B--Blooming Silt Loam, 1 To 6 Percent Slopes

Component Description

Blooming and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bt--9 to 21 inches; silty clay loam
2Bt--21 to 48 inches; sandy clay loam
2C--48 to 60 inches; loam

408--Faxon Silty Clay Loam

Component Description

Faxon and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Bedrock (lithic): 20 to 40 inches
Drainage class: Poorly drained
Parent material:
Alluvium over bedrock
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Frequent April May
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.3 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A--0 to 28 inches; silty clay loam
2Cg--28 to 37 inches; flaggy loam
2R--37 to 60 inches; unweathered bedrock

409B--Etter Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Etter and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:

Glacial drift over sandy residuum
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,A--0 to 15 inches; fine sandy loam
Bw--15 to 21 inches; fine sandy loam
2C--21 to 60 inches; fine sand

409C--Etter Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Etter and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glacial drift over sandy residuum
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A--0 to 15 inches; fine sandy loam
Bw--15 to 21 inches; fine sandy loam
2C--21 to 60 inches; fine sand

411A--Waukegan Silt Loam, 0 To 1 Percent Slopes

Component Description

Waukegan and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glaciofluvial sediments over outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,AB--0 to 13 inches; silt loam
Bt--13 to 28 inches; silt loam
2BC,2C--28 to 60 inches; gravelly sand

411B--Waukegan Silt Loam, 1 To 6 Percent Slopes

Component Description

Waukegan and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:

Glaciofluvial sediments over outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,AB--0 to 13 inches; silt loam
Bt--13 to 28 inches; silt loam
2BC,2C--28 to 60 inches; gravelly sand

411C--Waukegan Silt Loam, 6 To 12 Percent Slopes

Component Description

Waukegan and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glaciofluvial sediments over outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,AB--0 to 13 inches; silt loam
Bt--13 to 28 inches; silt loam
2BC,2C--28 to 60 inches; gravelly sand

414--Hamel Silt Loam

Component Description

Hamel and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 16 inches; silt loam
Btg--16 to 40 inches; silty clay loam
C--40 to 60 inches; loam

415A--Kanaranzi Loam, 0 To 2 Percent Slopes

Component Description

Kanaranzi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 19 inches; loam
2BC,2C--19 to 60 inches; coarse sand

415B--Kanaranzi Loam, 2 To 6 Percent Slopes

Component Description

Kanaranzi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 19 inches; loam
2BC,2C--19 to 60 inches; coarse sand

415C--Kanaranzi Loam, 6 To 12 Percent Slopes

Component Description

Kanaranzi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 19 inches; loam
2BC,2C--19 to 60 inches; coarse sand

449B--Crystal Lake Silt Loam, 1 To 8 Percent Slopes

Component Description

Crystal lake and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 1 to 8 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:

Glaciolacustine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bt--9 to 40 inches; silty clay loam
C--40 to 60 inches; stratified fine sand to silty clay loam

454B--Mahtomedi Loamy Sand, 3 To 8 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Slope range: 3 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 5 inches; loamy sand
Bw--5 to 35 inches; coarse sand
C--35 to 60 inches; sand

454C--Mahtomedi Loamy Sand, 8 To 15 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 5 inches; loamy sand
Bw--5 to 35 inches; coarse sand
C--35 to 60 inches; sand

454E--Mahtomedi Loamy Sand, 15 To 25 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Moraine
Slope range: 15 to 25 percent

Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 5 inches; loamy sand
Bw--5 to 35 inches; coarse sand
C--35 to 60 inches; sand

463--Minneiska Loam, Occasionally Flooded

Component Description

Minneiska, occasionally flooded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 3.1 percent
Typical profile:
A--0 to 8 inches; loam
C--8 to 60 inches; stratified sand to silt loam

465--Kalmarville Sandy Loam, Frequently Flooded

Component Description

Kalmarville, frequently flooded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.3 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 42 inches; sandy loam
2C--42 to 60 inches; sand

495--Zumbro Fine Sandy Loam

Component Description

Zumbro and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A1--0 to 18 inches; fine sandy loam
A2,A3--18 to 56 inches; loamy fine sand
Bw--56 to 60 inches; fine sand

522--Boots Muck

Component Description

Boots and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa--0 to 5 inches; muck
Oe1,Oe2--5 to 60 inches; mucky peat

539--Palms Muck

Component Description

Palms and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over loamy sediments
Flooding does not occur (months):
January February August September October November

December
        Flooding is most likely (frequency, months):
Frequent   March April May June
        Wet soil moisture status is highest (depth, months):
At the surface   April May June
        Wet soil moisture status is lowest (depth, months):
1.5 feet   February
        Ponding is shallowest (depth, months):
0.5 foot   June
        Ponding is deepest (depth, months):
1.0 foot   March April May
        Available water capacity to a depth of 60 inches: 21.7 inches
        Content of organic matter in the upper 10 inches: 42.5 percent
        Typical profile:
Oa1,Oa2--0 to 45 inches; muck
2Ab--45 to 56 inches; clay loam
2Cg--56 to 60 inches; clay loam

540--Seelyeville Muck

  Component Description

     Seelyeville and similar soils
        Extent: 100 percent of the unit
        Geomorphic description:
Flood plain
Moraine
        Slope range: 0 to 1 percent
        Surface layer texture: Muck
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Very poorly drained
        Parent material:
Organic material
        Flooding does not occur (months):
January February August September October November
December
        Flooding is most likely (frequency, months):
Frequent   March April May June
        Wet soil moisture status is highest (depth, months):
At the surface   April May June
        Wet soil moisture status is lowest (depth, months):
1.5 feet   February
        Ponding is shallowest (depth, months):
0.5 foot   June
        Ponding is deepest (depth, months):
1.0 foot   March April May
        Available water capacity to a depth of 60 inches: 23.9 inches
        Content of organic matter in the upper 10 inches: 62.0 percent
        Typical profile:
Oa1--0 to 6 inches; muck
Oa2,Oa3,Oa4--6 to 60 inches; muck

545--Rondeau Muck

  Component Description

     Rondeau and similar soils
        Extent: 100 percent of the unit
        Geomorphic description:
Flood plain
Moraine
        Slope range: 0 to 1 percent
        Surface layer texture: Muck
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Very poorly drained
        Parent material:
Organic material over limnic sediments
        Flooding does not occur (months):
January February August September October November
December
        Flooding is most likely (frequency, months):
Frequent   March April May June
        Wet soil moisture status is highest (depth, months):
At the surface   April May June
        Wet soil moisture status is lowest (depth, months):
1.5 feet   February

Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 22.0 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa--0 to 45 inches; muck
Ck--45 to 60 inches; marl

611C--Hawick Coarse Sandy Loam, 6 To 12 Percent Slopes

Component Description

Hawick and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Slope range: 6 to 12 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,AB--0 to 11 inches; coarse sandy loam
Bw,BC--11 to 21 inches; gravelly loamy coarse sand
C--21 to 60 inches; gravelly coarse sand

611D--Hawick Coarse Sandy Loam, 12 To 18 Percent Slopes

Component Description

Hawick and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 12 to 18 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,AB--0 to 11 inches; coarse sandy loam
Bw,BC--11 to 21 inches; gravelly loamy coarse sand
C--21 to 60 inches; gravelly coarse sand

611E--Hawick Loamy Sand, 18 To 25 Percent Slopes

Component Description

Hawick and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Slope range: 18 to 25 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:

Outwash
        Flooding: None
        Depth to wet soil moisture status: More than 5.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 3.4 inches
        Content of organic matter in the upper 10 inches: 1.9 percent
        Typical profile:
A--0 to 9 inches; loamy sand
Bw,BC--9 to 21 inches; gravelly loamy coarse sand
C--21 to 60 inches; gravelly coarse sand

611F--Hawick Loamy Sand, 25 To 50 Percent Slopes

  Component Description

     Hawick and similar soils
        Extent: 100 percent of the unit
        Geomorphic description:
Stream terrace
Outwash plain
        Slope range: 25 to 50 percent
        Surface layer texture: Loamy sand
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Excessively drained
        Parent material:
Outwash
        Flooding: None
        Depth to wet soil moisture status: More than 5.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 3.4 inches
        Content of organic matter in the upper 10 inches: 1.9 percent
        Typical profile:
A--0 to 9 inches; loamy sand
Bw,BC--9 to 21 inches; gravelly loamy coarse sand
C--21 to 60 inches; gravelly coarse sand

857A--Urban Land-Waukegan Complex, 0 To 1 Percent Slopes

  Component Description

     Urban land
        Extent: 90 percent of the unit
        Geomorphic description:
Outwash plain

857B--Urban Land-Waukegan Complex, 1 To 8 Percent Slopes

  Component Description

     Urban land
        Extent: 90 percent of the unit
        Geomorphic description:
Outwash plain

858C--Urban Land-Chetek Complex, 1 To 15 Percent Slopes

  Component Description

     Urban land
        Extent: 65 percent of the unit
        Geomorphic description:
Moraine
Outwash plain

     Chetek and similar soils
        Extent: 35 percent of the unit
        Geomorphic description:
Outwash plain
Moraine
        Slope range: 1 to 15 percent
        Surface layer texture: Sandy loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Somewhat excessively drained
        Parent material:

Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A,AB--0 to 7 inches; sandy loam
Bt--7 to 14 inches; loam
2Bt--14 to 24 inches; gravelly loamy sand
2C--24 to 60 inches; stratified very gravelly coarse sand to sand

860C--Urban Land-Lester Complex, 3 To 15 Percent Slopes

Component Description

Urban land
Extent: 65 percent of the unit
Geomorphic description:
Moraine

Lester and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Moraine
Slope range: 3 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
Ap--0 to 6 inches; loam
BA,Bt,Bw--6 to 38 inches; clay loam
C--38 to 60 inches; loam

861C--Urban Land-Kingsley Complex, 3 To 15 Percent Slopes

Component Description

Urban land
Extent: 65 percent of the unit
Geomorphic description:
Moraine

Kingsley and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Moraine
Slope range: 3 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

861E--Urban Land-Kingsley Complex, 15 To 25 Percent Slopes

Component Description

Urban land
Extent: 65 percent of the unit
Geomorphic description:
Moraine

Kingsley and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Moraine
Slope range: 15 to 25 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

865B--Urban Land-Hubbard Complex, 0 To 6 Percent Slopes

Component Description

Urban land
Extent: 65 percent of the unit
Geomorphic description:
Outwash plain

Hubbard and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A1,A2--0 to 16 inches; loamy sand
BA,Bw--16 to 38 inches; loamy sand
C--38 to 60 inches; sand

880F--Brodale-Rock Outcrop Complex, 18 To 45 Percent Slopes

Component Description

Brodale and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Hill
Slope range: 18 to 45 percent
Surface layer texture: Flaggy loam
Depth to restrictive feature:
Bedrock (lithic): 40 to 80 inches
Drainage class: Excessively drained
Parent material:
Colluvium over bedrock
Flooding: None
Depth to wet soil moisture status: More than 3.9 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:

A1--0 to 6 inches; flaggy loam
Bw,C--6 to 47 inches; very flaggy very fine sandy loam
R--47 to 51 inches; unweathered bedrock

Rock outcrop
Extent: 30 percent of the unit
Geomorphic description:
Hill

888B--Kingsley-Lester Complex, 2 To 6 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

Lester and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
Ap--0 to 6 inches; loam
BA,Bt,Bw--6 to 38 inches; clay loam
C--38 to 60 inches; loam

888C--Kingsley-Lester Complex, 6 To 12 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Moraine
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

Lester and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
Ap--0 to 6 inches; loam
BA,Bt,Bw--6 to 38 inches; clay loam
C--38 to 60 inches; loam

888D--Kingsley-Lester Complex, 12 To 18 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Moraine
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

Lester and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
Ap--0 to 6 inches; loam
BA,Bt,Bw--6 to 38 inches; clay loam
C--38 to 60 inches; loam

889B--Wadena-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Wadena and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Valley train
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A,AB--0 to 16 inches; loam
Bw--16 to 31 inches; loam
2BC,2C--31 to 60 inches; stratified gravelly coarse sand to sand

Hawick and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Outwash plain
Valley train
Slope range: 2 to 6 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,AB--0 to 11 inches; coarse sandy loam
Bw,BC--11 to 21 inches; gravelly loamy coarse sand
C--21 to 60 inches; gravelly coarse sand

889C--Wadena-Hawick Complex, 6 To 12 Percent Slopes

Component Description

Wadena and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Valley train
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A,AB--0 to 16 inches; loam
Bw--16 to 31 inches; loam
2BC,2C--31 to 60 inches; stratified gravelly coarse sand to sand

Hawick and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Outwash plain
Valley train
Slope range: 6 to 12 percent
Surface layer texture: Coarse sandy loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,AB--0 to 11 inches; coarse sandy loam
Bw,BC--11 to 21 inches; gravelly loamy coarse sand
C--21 to 60 inches; gravelly coarse sand

889D--Wadena-Hawick Complex, 12 To 18 Percent Slopes

Component Description

Wadena and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A,AB--0 to 16 inches; loam
Bw--16 to 31 inches; loam
2BC,2C--31 to 60 inches; stratified gravelly coarse sand to sand

Hawick and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Slope range: 12 to 18 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,AB--0 to 11 inches; coarse sandy loam
Bw,BC--11 to 21 inches; gravelly loamy coarse sand
C--21 to 60 inches; gravelly coarse sand

895B--Kingsley-Mahtomedi-Spencer Complex, 3 To 8 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Moraine
Slope range: 3 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till

Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

Mahtomedi and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Slope range: 3 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 5 inches; loamy sand
Bw--5 to 35 inches; coarse sand
C--35 to 60 inches; sand

Spencer and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Slope range: 3 to 8 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Loess over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 7 inches; silt loam
E--7 to 13 inches; silt loam
Bt--13 to 35 inches; silt loam
Bw--35 to 45 inches; silt loam
2C--45 to 60 inches; sandy loam

895C--Kingsley-Mahtomedi-Spencer Complex, 8 To 15 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Moraine
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent

Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

Mahtomedi and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 5 inches; loamy sand
Bw--5 to 35 inches; coarse sand
C--35 to 60 inches; sand

Spencer and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Slope range: 8 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Loess over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 7 inches; silt loam
E--7 to 13 inches; silt loam
Bt--13 to 35 inches; silt loam
Bw--35 to 45 inches; silt loam
2C--45 to 60 inches; sandy loam

896E--Kingsley-Mahtomedi Complex, 15 To 25 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Moraine
Slope range: 15 to 25 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

Mahtomedi and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Moraine
Slope range: 15 to 25 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 5 inches; loamy sand
Bw--5 to 35 inches; coarse sand
C--35 to 60 inches; sand

896F--Kingsley-Mahtomedi Complex, 25 To 40 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Moraine
Slope range: 25 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
A--0 to 8 inches; sandy loam
E--8 to 12 inches; loamy sand
Bt,Bw--12 to 38 inches; sandy loam
C--38 to 60 inches; sandy loam

Mahtomedi and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Moraine
Slope range: 25 to 40 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 5 inches; loamy sand
Bw--5 to 35 inches; coarse sand
C--35 to 60 inches; sand

963C2--Timula-Bold Silt Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Timula, eroded and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill
Slope range: 6 to 12 percent

Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
Ap--0 to 8 inches; silt loam
Bw,C--8 to 60 inches; silt loam

Bold, eroded and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; silt loam
C--8 to 60 inches; silt loam

963D2--Timula-Bold Silt Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Timula, eroded and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill
Slope range: 12 to 18 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
Ap--0 to 8 inches; silt loam
Bw,C--8 to 60 inches; silt loam

Bold, eroded and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill
Slope range: 12 to 18 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; silt loam
C--8 to 60 inches; silt loam

963E2--Timula-Bold Silt Loams, 18 To 25 Percent Slopes, Eroded

Component Description

Timula, eroded and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill
Slope range: 18 to 25 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
A--0 to 8 inches; silt loam
Bw,C--8 to 60 inches; silt loam

Bold, eroded and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill
Slope range: 18 to 25 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
A--0 to 8 inches; silt loam
C--8 to 60 inches; silt loam

1013--Pits, Quarry

Component Description

Pits
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Moraine
Parent material:
Limestone and sandstone bedrock

1027--Udorthents, Wet

Component Description

Udorthents, wet substratum
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Moraine
Position on landform:
Fill placed in depressions
Parent material:
Variable soil material
Flooding: None

The Udorthents, wet substratum component comprises of fill material placed in these wet depressional areas to match the adjoining upland landscape. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1029--Pits, Gravel

Component Description

Pits
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Moraine
Outwash plain
Parent material:
Gravelly and sandy outwash

Gravel pits are areas that have been mined for gravel or sand. This map unit is actively being mined or is an abandoned pit. Because of the variability of this component in this map unit, interpretation for specific uses are not available. Onsite investigation is needed.

1039--Urban Land

Component Description

Urban land
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Moraine
Outwash plain
Flooding: None

The Urban land component is mainly commercial, industrial or residental areas with 65 to 100 percent of the mapunit covered by impervious surfaces.

1055--Aquolls And Histosols, Ponded

Component Description

Aquolls, ponded and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Variable
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Mineral sediments
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Typical profile:
AC--0 to 60 inches; variable

Histosols, ponded and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 59.5 percent
Typical profile:

Oa--0 to 60 inches; muck

1072--Udorthents, Moderately Shallow

Component Description

Udorthents, moderately shallow
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Moraine
Slope range: 0 to 6 percent
Parent material:
Variable soil material
Flooding: None

The Udorthents component comprises of areas that are active or inactive sanitary landfills. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1815--Zumbro Loamy Fine Sand

Component Description

Zumbro and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A1--0 to 18 inches; loamy fine sand
A2,A3--18 to 56 inches; loamy fine sand
Bw--56 to 60 inches; fine sand

1816--Kennebec Variant Silt Loam

Component Description

Kennebec variant and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 0 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Colluvium
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2,A3--0 to 37 inches; silt loam
Ab,Bb--37 to 60 inches; silty clay loam

1821--Algansee Sandy Loam, Occasionally Flooded

Component Description

Algansee, occasionally flooded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 5.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 12 inches; sandy loam
C--12 to 60 inches; stratified sand to loam

1824--Quam Silt Loam, Ponded

Component Description

Quam, ponded and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustine sediments
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
A1--0 to 12 inches; silt loam
A2,Ab1,Ab2--12 to 45 inches; silt loam
Cg--45 to 60 inches; silt loam

1825C--Seelyeville Muck, Sloping

Component Description

Seelyeville, sloping and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Escarpment
Slope range: 0 to 15 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February

Ponding: None
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa--0 to 60 inches; muck

1827A--Waukegan Silt Loam, Bedrock Substratum, 0 To 2 Percent Slopes

Component Description

Waukegan, bedrock substratum and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Bedrock (lithic): 30 to 45 inches
Drainage class: Well drained
Parent material:
Glaciofluvial sediments over bedrock
Flooding: None
Depth to wet soil moisture status: More than 3.3 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,AB--0 to 17 inches; silt loam
Bt--17 to 36 inches; silt loam
2C--36 to 40 inches; sand
R--40 to 60 inches; unweathered bedrock

1827B--Waukegan Silt Loam, Bedrock Substratum, 2 To 6 Percent Slopes

Component Description

Waukegan, bedrock substratum and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Bedrock (lithic): 30 to 45 inches
Drainage class: Well drained
Parent material:
Glaciofluvial sediments over bedrock
Flooding: None
Depth to wet soil moisture status: More than 3.3 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,AB--0 to 17 inches; silt loam
Bt--17 to 36 inches; silt loam
2C--36 to 40 inches; sand
R--40 to 60 inches; unweathered bedrock

1827C--Waukegan Silt Loam, Bedrock Substratum, 6 To 12 Percent Slopes

Component Description

Waukegan, bedrock substratum and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Bedrock (lithic): 30 to 45 inches
Drainage class: Well drained
Parent material:
Glaciofluvial sediments over bedrock
Flooding: None
Depth to wet soil moisture status: More than 3.3 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches

Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,AB--0 to 17 inches; silt loam
Bt--17 to 36 inches; silt loam
2C--36 to 40 inches; sand
R--40 to 60 inches; unweathered bedrock

1848B--Sparta Loamy Sand, Bedrock Substratum, 2 To 8 Percent Slopes

Component Description

Sparta, bedrock substratum and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Hill
Slope range: 2 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Bedrock (lithic): 40 to 60 inches
Drainage class: Excessively drained
Parent material:
Outwash over bedrock
Flooding: None
Depth to wet soil moisture status: More than 3.5 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 10 inches; loamy sand
Bw--10 to 38 inches; fine sand
2Bw--38 to 42 inches; clay loam
R--42 to 60 inches; unweathered bedrock

1894B--Winnebago Loam, 2 To 6 Percent Slopes

Component Description

Winnebago and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 15 inches; loam
2Bt,2BC--15 to 44 inches; sandy clay loam
2C--44 to 60 inches; sandy loam

1895B--Carmi Loam, 2 To 8 Percent Slopes

Component Description

Carmi and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 8 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches

Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 13 inches; loam
Bw,Bt--13 to 25 inches; sandy loam
2Bw,2C--25 to 60 inches; stratified gravelly coarse sand to loamy sand

1896B--Ostrander-Carmi Loams, 2 To 6 Percent Slopes

Component Description

Ostrander and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; loam
2Bw--17 to 53 inches; loam
2C--53 to 60 inches; loam

Carmi and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 13 inches; loam
Bw,Bt--13 to 25 inches; sandy loam
2Bw,2C--25 to 60 inches; stratified gravelly coarse sand to loamy sand

1898F--Etter-Brodale Complex, 25 To 60 Percent Slopes

Component Description

Etter and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill
Slope range: 25 to 40 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glacial drift over sandy residuum
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A--0 to 15 inches; fine sandy loam
Bw--15 to 21 inches; fine sandy loam
2C--21 to 60 inches; fine sand

Brodale and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill
Slope range: 25 to 60 percent
Surface layer texture: Very flaggy loam
Depth to restrictive feature:
Bedrock (lithic): 40 to 80 inches
Drainage class: Excessively drained
Parent material:
Colluvium over bedrock
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
A--0 to 6 inches; very flaggy loam
Bw--6 to 47 inches; very flaggy very fine sandy loam
R--47 to 60 inches; unweathered bedrock

1902B--Jewett Silt Loam, 1 To 6 Percent Slopes

Component Description

Jewett and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Loess over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,E--0 to 13 inches; silt loam
Bt--13 to 24 inches; silt loam
2Bt--24 to 33 inches; loam
2C--33 to 60 inches; sandy loam

CW--Census Water

Additional Components

Census water: 100 percent of the unit

Dodge County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Douglas County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

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Soil Descriptions - Non Technical

8B--Sparta Loamy Fine Sand, 0 To 6 Percent Slopes

Component Description

Sparta and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A--0 to 12 inches; loamy fine sand
Bw--12 to 31 inches; loamy fine sand
C--31 to 60 inches; fine sand

27B--Dickinson Fine Sandy Loam, 0 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A--0 to 14 inches; fine sandy loam
Bw--14 to 39 inches; fine sandy loam
C--39 to 60 inches; loamy fine sand

27C--Dickinson Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.9 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A--0 to 10 inches; fine sandy loam
Bw--10 to 31 inches; fine sandy loam
C1--31 to 43 inches; loamy sand
C2--43 to 60 inches; sand

35--Blue Earth Mucky Silty Clay Loam

Component Description

Blue earth and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
Ap--0 to 10 inches; mucky silty clay loam
Cg--10 to 60 inches; mucky silty clay loam

37B--Farrar Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Farrar and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A--0 to 16 inches; fine sandy loam
Bw1--16 to 25 inches; fine sandy loam
2Bw2--25 to 41 inches; loam
2C--41 to 60 inches; loam

41B--Estherville Sandy Loam, 0 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 14 inches; sandy loam
Bw--14 to 19 inches; sandy loam
2C--19 to 60 inches; gravelly coarse sand

84--Brownton Silty Clay Loam

Component Description

Brownton and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 16 inches; silty clay loam
Bg--16 to 30 inches; silty clay
Cg--30 to 60 inches; silty clay loam

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 18 inches; clay loam
Bg--18 to 25 inches; loam
Cg--25 to 60 inches; loam

94B--Terril Loam, 2 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
A--0 to 36 inches; loam
Bw--36 to 40 inches; loam
C--40 to 60 inches; loam

96A--Collinwood Silty Clay Loam, 0 To 3 Percent Slopes

Component Description

Collinwood and similar soils

Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 16 inches; silty clay loam
Bw--16 to 32 inches; clay
C--32 to 60 inches; silty clay

96B--Collinwood Silty Clay Loam, 3 To 6 Percent Slopes

Component Description

Collinwood and similar soils
Extent: 85 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
Bw--10 to 39 inches; silty clay
C--39 to 60 inches; silty clay loam

101B--Truman Silt Loam, 1 To 6 Percent Slopes

Component Description

Truman and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 10 inches; silt loam
Bw--10 to 39 inches; silt loam
C--39 to 60 inches; silt loam

102B--Clarion Loam, 1 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A--0 to 16 inches; loam
Bw--16 to 28 inches; loam
C--28 to 60 inches; loam

110--Marna Silty Clay Loam

Component Description

Marna and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 10 inches; silty clay loam
Bg1--10 to 34 inches; silty clay
2Bg2--34 to 46 inches; clay loam
2Cg--46 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
A--0 to 18 inches; clay loam
Bg--18 to 44 inches; clay loam
Cg--44 to 60 inches; loam

114--Glencoe Clay Loam

Component Description

Glencoe and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression

Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
A--0 to 24 inches; clay loam
Bg--24 to 52 inches; clay loam
Cg--52 to 60 inches; loam

118--Crippin Loam

Component Description

Crippin and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
A--0 to 15 inches; loam
Bw--15 to 25 inches; loam
C--25 to 60 inches; loam

128B--Grogan Silt Loam, 1 To 6 Percent Slopes

Component Description

Grogan and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 18 inches; silt loam
Bw--18 to 30 inches; very fine sandy loam
C--30 to 60 inches; stratified loamy very fine sand to very fine
sandy loam to silt loam

130--Nicollet Clay Loam

Component Description

Nicollet and similar soils
Extent: 85 percent of the unit

Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 16 inches; clay loam
Bw--16 to 29 inches; clay loam
C--29 to 60 inches; clay loam

134--Okoboji Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
A--0 to 26 inches; silty clay loam
Bg--26 to 42 inches; silty clay loam
Cg--42 to 60 inches; silty clay

136--Madelia Silty Clay Loam

Component Description

Madelia and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Aa--0 to 15 inches; silty clay loam
Bg--15 to 27 inches; silty clay loam
Cg--27 to 60 inches; silt loam

140--Spicer Silt Loam

Component Description

Spicer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 15 inches; silt loam
Bg--15 to 34 inches; silt loam
Cg--34 to 60 inches; silt loam

160--Fieldon Loam

Component Description

Fieldon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 10 inches; loam
Bg--10 to 28 inches; fine sandy loam
Cg--28 to 60 inches; stratified fine sand to loamy fine sand to very fine sandy loam

181--Litchfield Fine Sandy Loam

Component Description

Litchfield and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 17 inches; fine sandy loam
Bw--17 to 41 inches; stratified fine sand to loamy very fine sand
C--41 to 60 inches; stratified fine sand to loamy very fine sand to very fine sandy loam

197--Kingston Silt Loam

Component Description

Kingston and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 10 inches; silt loam
Bw--10 to 37 inches; silty clay loam
C--37 to 60 inches; silt loam

211--Lura Silty Clay

Component Description

Lura and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A--0 to 34 inches; silty clay
Bg--34 to 50 inches; silty clay
Cg--50 to 60 inches; silty clay

229--Waldorf Silty Clay Loam

Component Description

Waldorf and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
Bg--10 to 38 inches; silty clay
Cg--38 to 60 inches; silty clay loam

230A--Guckeen Silty Clay Loam, 0 To 3 Percent Slopes

Component Description

Guckeen and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A--0 to 16 inches; silty clay loam
Bw1--16 to 24 inches; silty clay loam
2Bw2--24 to 32 inches; clay loam
2Cg--32 to 60 inches; loam

230B--Guckeen Silty Clay Loam, 3 To 6 Percent Slopes

Component Description

Guckeen and similar soils
Extent: 85 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Content of organic matter in the upper 10 inches: 5.0 percent

247--Linder Loam

Component Description

Linder and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.3 feet April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A--0 to 22 inches; loam
Bw--22 to 26 inches; sandy loam
2C--26 to 60 inches; gravelly coarse sand

248--Lomax Loam

Component Description

Lomax and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding does not occur (months):
January February June July August September October
November December
Flooding is most likely (frequency, months):
Rare March April May
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 25 inches; loam
Bw--25 to 60 inches; sandy loam

255--Mayer Loam

Component Description

Mayer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 23 inches; loam
Bg--23 to 39 inches; sandy clay loam
2C--39 to 60 inches; coarse sand

269--Millington Clay Loam

Component Description

Millington and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A--0 to 24 inches; clay loam
Bg--24 to 43 inches;
Cg--43 to 60 inches; stratified sandy loam to loam to clay loam

275B--Ocheyedan Loam, 2 To 6 Percent Slopes

Component Description

Ocheyedan and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 10 inches; loam
Bw--10 to 30 inches; loam
2C--30 to 60 inches; stratified loam to silt loam

275C2--Ocheyedan Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Ocheyedan and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 23 inches; loam
2C--23 to 60 inches; stratified loam to silt loam

281--Darfur Loam

Component Description

Darfur and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 22 inches; loam
Bg--22 to 36 inches; fine sandy loam
Cg--36 to 60 inches; stratified loamy sand to loamy fine sand to
fine sandy loam

286A--Shorewood Silty Clay Loam, 0 To 3 Percent Slopes

Component Description

Shorewood and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None

Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 11 inches; silty clay loam
Bt--11 to 37 inches; silty clay
C--37 to 60 inches; silty clay loam

286B--Shorewood Silty Clay Loam, 3 To 6 Percent Slopes

Component Description

Shorewood and similar soils
Extent: 85 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
Bt--10 to 35 inches; silty clay loam
C--35 to 60 inches; clay loam

286C2--Shorewood Silty Clay Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Shorewood and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August December
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 4.3 percent
Typical profile:
Ap--0 to 9 inches; silty clay loam
Bt--9 to 29 inches; silty clay
C--29 to 60 inches; silty clay loam

287--Minnetonka Silty Clay Loam

Component Description

Minnetonka and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):

2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
Btg--10 to 43 inches; silty clay loam
Cg--43 to 60 inches; silty clay loam

310--Beauford Silty Clay

Component Description

Beauford and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 9 inches; silty clay
A--9 to 22 inches; silty clay
Bg--22 to 45 inches; clay
Cg--45 to 60 inches; stratified silty clay loam to silty clay

313--Spillville Loam

Component Description

Spillville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1--0 to 19 inches; loam
A2--19 to 51 inches; loam
C--51 to 60 inches; loam

319--Barbert Silty Clay Loam

Component Description

Barbert and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None

Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 14 inches; silty clay loam
E--14 to 25 inches; silt loam
Btg--25 to 45 inches; clay
Cg--45 to 60 inches; silty clay

336--Delft Loam

Component Description

Delft and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap--0 to 12 inches; loam
A--12 to 25 inches; loam
Bg--25 to 50 inches; clay loam
Cg--50 to 60 inches; loam

392--Biscay Loam

Component Description

Biscay and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 20 inches; loam
Bg--20 to 36 inches; sandy clay loam
2Cg--36 to 60 inches; stratified loamy sand to gravelly coarse sand

525--Muskego Muck

Component Description

Muskego and similar soils
Extent: 100 percent of the unit
Geomorphic description:

Depression
Slope range: 0 to 2 percent
Surface layer texture:
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 18.6 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa--0 to 32 inches;
2Cg--32 to 60 inches; coprogenous earth

539--Klossner Muck

Component Description

Klossner and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture:
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 16.7 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 25 inches;
2A--25 to 33 inches; silty clay loam
2Cg--33 to 60 inches; silty clay loam

887B--Clarion-Swanlake Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 45 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A--0 to 14 inches; loam
Bw--14 to 29 inches; loam
C--29 to 60 inches; loam

Swanlake and similar soils
Extent: 30 percent of the unit
Slope range: 4 to 6 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 11 inches; loam
Bk--11 to 24 inches; loam
C2--24 to 60 inches; loam

909C2--Truman-Bold Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Truman and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 10 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap--0 to 10 inches; silt loam
Bw--10 to 18 inches; silt loam
C--18 to 60 inches; silt loam

Bold and similar soils
Extent: 35 percent of the unit
Slope range: 8 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; silt loam
C--8 to 60 inches; silt loam

909D2--Bold-Truman Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Bold and similar soils
Extent: 40 percent of the unit
Slope range: 14 to 18 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.3 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 9 inches; silt loam
C--9 to 60 inches; silt loam

Truman and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 16 percent

Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 7 inches; silt loam
Bw--7 to 24 inches; silt loam
C--24 to 60 inches; silt loam

920B--Clarion-Estherville Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 55 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A--0 to 14 inches; loam
Bw--14 to 24 inches; loam
C--24 to 60 inches; loam

Estherville and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bw--10 to 15 inches; sandy loam
2C--15 to 60 inches; gravelly coarse sand

920C2--Clarion-Storden-Estherville Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 27 inches; loam
C--27 to 60 inches; loam

Estherville and similar soils

Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 17 inches; sandy loam
2C--17 to 60 inches; coarse sand

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 8 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H3--9 to 60 inches; loam

920D2--Clarion-Storden-Estherville Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 16 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; loam
Bw--10 to 22 inches; loam
C--22 to 60 inches; loam

Storden and similar soils
Extent: 25 percent of the unit
Slope range: 14 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
Ap--0 to 8 inches; loam
C2--8 to 60 inches; loam

Estherville and similar soils
Extent: 20 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches

Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A--0 to 16 inches; sandy loam
2C--16 to 60 inches; loamy coarse sand

921C2--Clarion-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; loam
Bw--10 to 18 inches; loam
C--18 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap--0 to 9 inches; loam
C--9 to 60 inches; loam

929--Fieldon-Canisteo Complex

Component Description

Fieldon and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 23 inches; loam
Bg--23 to 33 inches; stratified very fine sandy loam to loam
Cg--33 to 60 inches; stratified loamy very fine sand to very fine sandy loam

Canisteo and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained

Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 20 inches; loam
Bg--20 to 31 inches; loam
Cg--31 to 60 inches; loam

956--Canisteo-Glencoe Complex

Component Description

Canisteo and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 16 inches; clay loam
Bg--16 to 28 inches; clay loam
Cg--28 to 60 inches; loam

Glencoe and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
A--0 to 24 inches; clay loam
Bg--24 to 30 inches; silty clay loam
Cg--30 to 60 inches; clay loam

960D2--Storden-Clarion Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 35 percent of the unit
Slope range: 14 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
Ap--0 to 9 inches; loam
C2--9 to 60 inches; loam

Clarion and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 16 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 18 inches; loam
C--18 to 60 inches; loam

960E--Storden-Clarion Complex, 18 To 24 Percent Slopes

Component Description

Storden and similar soils
Extent: 35 percent of the unit
Slope range: 18 to 24 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 5 inches; loam
C--5 to 60 inches; loam

Clarion and similar soils
Extent: 30 percent of the unit
Slope range: 18 to 24 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 16 inches; loam
Bw--16 to 26 inches; loam
C--26 to 60 inches; loam

1030--Pits, Gravel-Udorthents Complex

Component Description

Pits
Extent: 50 percent of the unit

Udorthents and similar soils
Extent: 40 percent of the unit
Slope range: 0 to 50 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None

Udorthents comprise nearly level to gently undulating areas that

have been graded and the cut and fill material is dominatly loamy parent material. Natural soil profiles are of limited extent. The hydrology on this landform has been altered and because of the variability of this component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1052--Klossner-Okoboji Complex, Ponded

Component Description

Klossner and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 15.6 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 22 inches; muck
A--22 to 60 inches; silty clay loam

Okoboji and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 7.4 percent
Typical profile:
Ap--0 to 9 inches; silty clay loam
A1--9 to 24 inches; silty clay loam
A2--24 to 60 inches; silty clay loam

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

Miscellaneous water map units are not naturally occuring water areas. They are man made and include: sewage lagoons, storm water sediment basins with a permanent pool of water, and aquaculture ponds. This map unit is not soil, no interpretations assigned.

1833--Coland Silty Clay Loam, Occasionally Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):

Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
A--10 to 25 inches; clay loam
Cg--25 to 60 inches; loam

1834--Coland Loam, Frequently Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A1--0 to 12 inches; loam
A2--12 to 36 inches; clay loam
Cg--36 to 60 inches; loam

1852F--Swanlake-Terril Complex, 18 To 40 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 45 percent of the unit
Slope range: 20 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 12 inches; loam
Bk--12 to 16 inches; loam
C2--16 to 60 inches; loam

Terril and similar soils
Extent: 35 percent of the unit
Slope range: 18 to 30 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
A--0 to 29 inches; loam
Bw--29 to 48 inches; clay loam

C--48 to 60 inches; loam

1877--Fostoria Loam

Component Description

Fostoria and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap--0 to 10 inches; loam
Bw--10 to 32 inches; clay loam
2C--32 to 60 inches; stratified fine sandy loam to loam to silt loam

1907--Lakefield Silt Loam

Component Description

Lakefield and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A--0 to 18 inches; silt loam
C--18 to 60 inches; silt loam

W--Water

Component Description

Water
Extent: 100 percent of the unit
Geomorphic description:
Miscellaneous water map units are naturally occuring bodies of water.
they normally have permanent ponding of water. this map unit is not soil, no interpretations assigned.

Fillmore County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Freeborn County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Goodhue County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Grant County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Soil Descriptions - Non Technical

D1B--Anoka And Zimmerman Soils, Terrace, 2 To 6 Percent Slopes

Component Description

Anoka, terrace and similar soils
Extent: 30 to 60 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.0 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; loamy fine sand
E,E&Bt--10 to 60 inches; fine sand

Zimmerman, terrace and similar soils
Extent: 30 to 60 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Shoulder
Summit
Slope range: 2 to 4 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
Ap--0 to 9 inches; fine sand
E,E&Bt--9 to 60 inches; fine sand

D1C--Anoka And Zimmerman Soils, Terrace, 6 To 12 Percent Slopes

Component Description

Anoka, terrace and similar soils
Extent: 35 to 65 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Summit
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.0 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; loamy fine sand
E,E&Bt--10 to 60 inches; fine sand

Zimmerman, terrace and similar soils
Extent: 35 to 65 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
Ap--0 to 9 inches; fine sand
E,E&Bt--9 to 60 inches; fine sand

D2A--Elkriver Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded

Component Description

Elkriver, rarely flooded and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
A1,A3--10 to 35 inches; fine sandy loam
Bw--35 to 39 inches; fine sandy loam
2C--39 to 80 inches; sand

D3A--Elkriver Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Elkriver, occasionally flooded and similar soils
Extent: 75 to 95 percent of the unit

Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
A1,A3--10 to 26 inches; fine sandy loam
Bw--26 to 32 inches; very fine sandy loam
2C--32 to 80 inches; sand

Additional Components

Fordum, frequently flooded and similar soils: 5 to 20 percent of the unit

D4A--Dorset Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dorset and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bt--12 to 20 inches; coarse sandy loam
2BC--20 to 27 inches; gravelly coarse sand
2C--27 to 60 inches; gravelly coarse sand

D4B--Dorset Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dorset and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Shoulder
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bt--12 to 20 inches; coarse sandy loam
2BC--20 to 27 inches; gravelly coarse sand
2C--27 to 60 inches; gravelly coarse sand

D4C--Dorset Sandy Loam, 6 To 12 Percent Slopes

Component Description

Dorset and similar soils
Extent: 70 to 85 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Summit
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt--11 to 19 inches; sandy loam
2BC--19 to 32 inches; gravelly loamy sand
2C--32 to 80 inches; gravelly coarse sand

Additional Components

Verndale, acid substratum and similar soils: 5 to 20 percent of the unit

D5B--Dorset-Two Inlets Complex, 2 To 6 Percent Slopes

Component Description

Dorset and similar soils
Extent: 50 to 75 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt--11 to 19 inches; sandy loam
2BC--19 to 32 inches; gravelly loamy sand
2C--32 to 80 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 20 to 30 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 9 inches; loamy sand
Bt--9 to 19 inches; gravelly loamy sand
C--19 to 80 inches; gravelly sand

D5C--Dorset-Two Inlets Complex, 6 To 12 Percent Slopes

Component Description

Dorset and similar soils
Extent: 50 to 65 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt--11 to 19 inches; sandy loam
2BC--19 to 32 inches; gravelly loamy sand
2C--32 to 80 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 9 inches; loamy sand
Bt--9 to 19 inches; gravelly loamy sand
C--19 to 80 inches; gravelly sand

D5D--Dorset-Two Inlets Complex, 12 To 18 Percent Slopes

Component Description

Dorset and similar soils
Extent: 45 to 60 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt,2BC--14 to 25 inches; gravelly loamy sand
2C--25 to 80 inches; gravelly sand

Two inlets and similar soils
Extent: 25 to 40 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 9 inches; loamy sand
Bt--9 to 19 inches; gravelly loamy sand
C--19 to 80 inches; gravelly sand

D6A--Verndale Sandy Loam, Acid Substratum, 0 To 2 Percent Slopes

Component Description

Verndale, acid substratum and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:

Ap--0 to 10 inches; sandy loam
Bt--10 to 19 inches; sandy loam
2Bw--19 to 28 inches; sand
2C--28 to 80 inches; sand

D6B--Verndale Sandy Loam, Acid Substratum, 2 To 6 Percent Slopes

Component Description

Verndale, acid substratum and similar soils
Extent: 75 to 100 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 19 inches; sandy loam
2Bw--19 to 28 inches; sand
2C--28 to 80 inches; sand

D6C--Verndale Sandy Loam, Acid Substratum, 6 To 12 Percent Slopes

Component Description

Verndale, acid substratum and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 19 inches; sandy loam
2Bw--19 to 28 inches; sand
2C--28 to 80 inches; sand

Additional Components

Dorset and similar soils: 15 percent of the unit

D7A--Hubbard Loamy Sand, 0 To 2 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 85 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace

Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,AB--0 to 20 inches; loamy sand
Bw--20 to 32 inches; loamy sand
BC,C--32 to 80 inches; sand

D7B--Hubbard Loamy Sand, 2 To 6 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 85 to 100 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 18 inches; loamy sand
Bw--18 to 23 inches; loamy sand
BC,C--23 to 80 inches; sand

D7C--Hubbard Loamy Sand, 6 To 12 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 75 to 100 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,AB--0 to 12 inches; loamy sand
Bw--12 to 33 inches; coarse sand
C--33 to 80 inches; coarse sand

D8B--Sandberg Loamy Coarse Sand, 2 To 6 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 90 to 100 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 14 inches; loamy coarse sand
Bw--14 to 32 inches; gravelly coarse sand
C--32 to 80 inches; sand

D8C--Sandberg Loamy Coarse Sand, 6 To 12 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 14 inches; loamy coarse sand
Bw--14 to 32 inches; gravelly coarse sand
C--32 to 80 inches; sand

Additional Components

Corliss and similar soils: 0 to 20 percent of the unit

D8D--Sandberg Loamy Coarse Sand, 12 To 18 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 75 to 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained

Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 11 inches; loamy coarse sand
Bw--11 to 27 inches; coarse sand
C--27 to 80 inches; gravelly coarse sand

D8E--Sandberg Loamy Coarse Sand, 18 To 35 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Escarpment
Position on landform:
Backslope
Shoulder
Slope range: 18 to 35 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 11 inches; loamy coarse sand
Bw--11 to 27 inches; coarse sand
C--27 to 80 inches; gravelly coarse sand

D10A--Forada Sandy Loam, 0 To 2 Percent Slopes

Component Description

Forada and similar soils
Extent: 85 to 100 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Swales
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bg--10 to 33 inches; loam
2Cg--33 to 60 inches; sand

D11A--Lindaas Silt Loam, 0 To 2 Percent Slopes

Component Description

Lindaas and similar soils
Extent: 75 to 100 percent of the unit
Geomorphic description:

Lake plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 16 inches; silt loam
Btg--16 to 32 inches; silty clay
Cg--32 to 80 inches; silty clay loam

D12A--Bygland Silt Loam, Map>25, 0 To 2 Percent Slopes

Component Description

Bygland, map>25 and similar soils
Extent: 75 to 100 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bt--9 to 23 inches; silty clay
BC--23 to 27 inches; silt loam
C--27 to 80 inches; stratified silt loam to silty clay loam

D12B--Bygland Silt Loam, Map>25, 2 To 6 Percent Slopes

Component Description

Bygland, map>25 and similar soils
Extent: 65 to 90 percent of the unit
Geomorphic description:
Hill on lake plain
Position on landform:
Backslope
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August September

Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bt--9 to 23 inches; silty clay
BC--23 to 27 inches; silt loam
C--27 to 80 inches; stratified silt loam to silty clay loam

Additional Components

Bygland, sandy substratum and similar soils: 5 to 20 percent of the unit

D12C2--Bygland Silt Loam, Map>25, 6 To 12 Percent Slopes, Eroded

Component Description

Bygland, map>25 and similar soils
Extent: 65 to 90 percent of the unit
Geomorphic description:
Hill on lake plain
Position on landform:
Backslope
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
Ap--0 to 7 inches; silt loam
Bt--7 to 20 inches; silty clay
BC--20 to 26 inches; silt loam
C--26 to 80 inches; stratified silt loam to silty clay loam

Additional Components

Bygland, sandy substratum and similar soils: 0 to 20 percent of the unit

D13A--Langola Loamy Fine Sand, Terrace, 0 To 2 Percent Slopes

Component Description

Langola, terrace and similar soils
Extent: 75 to 100 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent

Typical profile:
Ap,AB--0 to 15 inches; loamy fine sand
Bw--15 to 31 inches; loamy sand
2Bt--31 to 39 inches; sandy loam
2BC--39 to 43 inches; sandy loam
2Cd--43 to 60 inches; sandy loam

D13B--Langola Loamy Fine Sand, Terrace, 2 To 6 Percent Slopes

Component Description

Langola, terrace and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,AB--0 to 15 inches; loamy fine sand
Bw--15 to 31 inches; loamy sand
2Bt--31 to 39 inches; sandy loam
2BC--39 to 43 inches; sandy loam
2Cd--43 to 60 inches; sandy loam

D15A--Seelyeville-Markey Complex, Depressional, 0 To 1 Percent Slopes

Component Description

Seelyeville, drained and similar soils
Extent: 50 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oap--0 to 10 inches; muck
Oa2,Oa5--10 to 60 inches; muck

Markey, drained and similar soils
Extent: 15 to 30 percent of the unit

Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 13.1 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oap,Oa2,Oa3--0 to 28 inches; muck
A--28 to 32 inches; loamy sand
Cg--32 to 80 inches; sand

D16A--Seelyeville And Markey Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Seelyeville, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 15 inches; muck
Oa2,Oa3--15 to 80 inches; muck

Markey, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May

Available water capacity to a depth of 60 inches: 12.8 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 27 inches; muck
A--27 to 32 inches; loamy sand
Cg--32 to 80 inches; sand

D17A--Duelm Loamy Sand, 0 To 2 Percent Slopes

Component Description

Duelm and similar soils
Extent: 85 to 100 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.0 feet February August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,AB--0 to 16 inches; loamy sand
Bw--16 to 30 inches; coarse sand
C--30 to 80 inches; coarse sand

D18B--Braham Loamy Fine Sand, Terrace, 2 To 5 Percent Slopes

Component Description

Braham, terrace and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Summit
Shoulder
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February June July
August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 42 inches; sandy clay loam
2Bk--42 to 60 inches; loam

Additional Components

Duelm and similar soils: 0 to 20 percent of the unit

D19A--Fordum-Winterfield Complex, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Fordum, frequently flooded and similar soils
Extent: 50 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Concave drainageways
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 6.6 percent
Typical profile:
A--0 to 7 inches; fine sandy loam
Cg--7 to 28 inches; sandy loam
2Cg--28 to 80 inches; sand

Winterfield, frequently flooded and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
A--0 to 8 inches; loamy fine sand
C1,C2--8 to 20 inches; sand
C3,C5--20 to 80 inches; sand

D20A--Isan Sandy Loam, 0 To 2 Percent Slopes

Component Description

Isan and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Swales
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May

Wet soil moisture status is lowest (depth, months):
2.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 14 inches; sandy loam
AB,Bg--14 to 34 inches; loamy sand
Cg--34 to 80 inches; coarse sand

D21A--Isan Sandy Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Isan, depressional and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November
December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 14 inches; sandy loam
AB,Bg--14 to 34 inches; loamy sand
Cg--34 to 80 inches; coarse sand

Additional Components

Isan and similar soils: 10 to 20 percent of the unit

D23A--Southhaven Loam, 0 To 2 Percent Slopes

Component Description

Southhaven and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Colluvium over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A3--0 to 48 inches; loam
Bw--48 to 62 inches; loam
2Bw--62 to 66 inches; loamy sand
2C--66 to 80 inches; sand

D24A--Sedgeville Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Sedgeville, occasionally flooded and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
Ap,A--0 to 15 inches; loam
Bg--15 to 45 inches; loam
2Cg--45 to 80 inches; sand

Additional Components

Elkriver, occasionally flooded and similar soils: 5 to 20 percent of the unit

D25A--Soderville Loamy Fine Sand, Terrace, 0 To 3 Percent Slopes

Component Description

Soderville, terrace and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Slight concave swales
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March June July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap--0 to 9 inches; loamy fine sand
E--9 to 24 inches; loamy fine sand
Bt--24 to 31 inches; stratified loamy fine sand, stratified fine sandy loam
C--31 to 60 inches; sand

D26A--Foldahl Loamy Sand, Map>25, 0 To 3 Percent Slopes

Component Description

Foldahl, map>25 and similar soils

Extent: 85 to 100 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Slight rise
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over stratified sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 16 inches; loamy sand
Bw--16 to 31 inches; loamy sand
2Bw--31 to 40 inches; stratified loamy sand to sandy clay loam
2Bk--40 to 60 inches; stratified loamy sand to sandy clay loam

D27A--Dorset Sandy Loam, Loamy Substratum, 0 To 2 Percent Slopes

Component Description

Dorset, loamy substratum and similar soils
Extent: 70 to 100 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bt--12 to 20 inches; coarse sandy loam
2BC--20 to 60 inches; gravelly coarse sand
2C--60 to 80 inches; loam

Additional Components

Dorset and similar soils: 5 to 20 percent of the unit

D28B--Urban Land-Bygland, Map>25, Complex, 1 To 6 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Lake plain
Slope range: 1 to 6 percent
Parent material:
Silty and clayey glaciolacustrine deposits
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the Urban land component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Additional Components

Bygland, map>25 and similar soils: 0 to 20 percent of the unit

D29B--Urban Land-Hubbard, Bedrock Substratum, Complex, 0 To 8 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 0 to 8 percent
Parent material:
Sandy outwash over bedrock
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, intrepretations for specific uses are not available. On-site investigation is needed.

Hubbard, bedrock substratum and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Summit
Shoulder
Slope range: 0 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Bedrock (lithic): 40 to 80 inches
Drainage class: Excessively drained
Parent material:
Outwash over limestone bedrock
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 18 inches; loamy sand
Bw--18 to 23 inches; loamy sand
BC,C--23 to 60 inches; sand
2R--60 to 80 inches; unweathered bedrock, unweathered bedrock

D30A--Seelyeville And Markey Soils, Depressional, 0 To 1 Percent Slopes

Component Description

Seelyeville, surface drained and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November
December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 23.9 inches

Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 10 inches; muck
Oa2,Oa5--10 to 80 inches; muck

Markey, surface drained and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November
December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 15.8 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 36 inches; muck
A--36 to 42 inches; loamy sand
Cg--42 to 80 inches; sand

D31A--Urban Land-Duelm Complex, 0 To 2 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 0 to 2 percent
Parent material:
Outwash
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the Urban land component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Duelm and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.0 feet February August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,AB--0 to 16 inches; loamy sand

Bw--16 to 30 inches; coarse sand
C--30 to 80 inches; coarse sand

D33B--Urban Land-Dorset Complex, 0 To 8 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 0 to 8 percent
Parent material:
Outwash
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Dorset and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Summit
Shoulder
Slope range: 0 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bt--12 to 20 inches; coarse sandy loam
2BC--20 to 27 inches; gravelly coarse sand
2C--27 to 60 inches; gravelly coarse sand

D33C--Urban Land-Dorset Complex, 8 To 18 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 8 to 18 percent
Parent material:
Outwash
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, intrepretations for specific uses are not available. On-site investigation is needed.

Dorset and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Summit
Backslope
Slope range: 8 to 18 percent

Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt--11 to 19 inches; sandy loam
2BC--19 to 32 inches; gravelly loamy sand
2C--32 to 80 inches; gravelly coarse sand

D34B--Urban Land-Hubbard Complex, 0 To 8 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 0 to 8 percent
Parent material:
Outwash
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Hubbard and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Shoulder
Summit
Slope range: 0 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 18 inches; loamy sand
Bw--18 to 23 inches; loamy sand
BC,C--23 to 80 inches; sand

D35A--Elkriver-Fordum Complex, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Elkriver, occasionally flooded and similar soils
Extent: 70 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:

Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
A1,A3--10 to 26 inches; fine sandy loam
Bw--26 to 32 inches; very fine sandy loam
2C--32 to 80 inches; sand

Fordum, occasionally flooded and similar soils
Extent: 5 to 25 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Concave drainageways
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 6.6 percent
Typical profile:
A--0 to 7 inches; fine sandy loam
Cg--7 to 28 inches; sandy loam
2Cg--28 to 80 inches; sand

D37F--Dorset, Bedrock Substratum-Rock Outcrop Complex, 25 To 65 Percent Slopes

Component Description

Dorset, bedrock substratum and similar soils
Extent: 65 to 95 percent of the unit
Geomorphic description:
Escarpment
Position on landform:
Summit
Slope range: 25 to 65 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Bedrock (lithic): 40 to 80 inches
Drainage class: Well drained
Parent material:
Outwash over limestone bedrock
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 12 inches; sandy loam
Bt--12 to 20 inches; coarse sandy loam
2BC--20 to 27 inches; gravelly coarse sand
2C--27 to 60 inches; gravelly coarse sand
2R--60 to 80 inches; unweathered bedrock, unweathered bedrock

Rock outcrop
Extent: 10 to 35 percent of the unit

Geomorphic description:
Escarpment
Position on landform:
Shoulder
Summit
Slope range: 0 to 3 percent
Depth to restrictive feature:
Bedrock (lithic): 0 to 0 inches
Parent material:
Limestone bedrock

D40A--Kratka Loamy Fine Sand, Thick Solum, 0 To 2 Percent Slopes

Component Description

Kratka, thick solum and similar soils
Extent: 75 to 90 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; loamy fine sand
Bg--10 to 30 inches; fine sand
2Bg,2Cg--30 to 60 inches; clay loam

D41C--Urban Land-Waukon Complex, 6 To 18 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Stream terrace
Slope range: 6 to 18 percent
Parent material:
Till
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the Urban land component in this map unit, interpretations for specific uses are not available. On-site investigation is needed.

Waukon and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Summit
Backslope
Slope range: 6 to 18 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 8 inches; fine sandy loam
E,BE,Bt--8 to 43 inches; loam
Bk--43 to 80 inches; loam

D43A--Gonvick Loam, Terrace, 1 To 3 Percent Slopes

Component Description

Gonvick and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Slight rise
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,A--0 to 12 inches; loam
Bt--12 to 30 inches; clay loam, clay loam
Bk,C--30 to 60 inches; loam, loam

Additional Components

Braham and similar soils: 5 to 25 percent of the unit

GP--Pits, Gravel-Udipsamments Complex

Component Description

Pits, gravel
Extent: 50 to 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Stream terrace
Parent material:
Sandy and gravelly outwash

Gravel pits are areas that have been mined for gravel or sand. This map unit is actively being mined or is an abandoned pit. Because of the variability of this component in this map unit, interpretation for specific uses are not available. Onsite investigation is needed.

Udipsamments
Extent: 15 to 30 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Moraine
Parent material:
Outwash

Udipsamments are areas of soil that support plant growth and are areas of the pit that have been reclaimed or abandoned. Because of the variability of this component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

L2B--Malardi-Hawick Complex, 1 To 6 Percent Slopes

Component Description

Malardi and similar soils
Extent: 60 to 80 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

Hawick and similar soils
Extent: 10 to 30 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Shoulder
Slope range: 3 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

L2C--Malardi-Hawick Complex, 6 To 12 Percent Slopes

Component Description

Malardi and similar soils
Extent: 60 to 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam

2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

Hawick and similar soils
Extent: 10 to 30 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

L2D--Malardi-Hawick Complex, 12 To 18 Percent Slopes

Component Description

Malardi and similar soils
Extent: 50 to 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

Hawick and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand

C--11 to 80 inches; gravelly coarse sand

L2E--Malardi-Hawick Complex, 18 To 35 Percent Slopes

Component Description

Malardi and similar soils
Extent: 50 to 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Backslope
Slope range: 18 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 4.6 percent
Typical profile:
A--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

Hawick and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 18 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

Additional Components

Tomall and similar soils: 5 to 25 percent of the unit

L3A--Rasset Sandy Loam, 0 To 2 Percent Slopes

Component Description

Rasset and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 15 inches; sandy loam
Bt--15 to 28 inches; sandy loam
2BC--28 to 36 inches; loamy sand
2C--36 to 80 inches; sand

L3B--Rasset Sandy Loam, 2 To 6 Percent Slopes

Component Description

Rasset and similar soils
Extent: 75 to 100 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 15 inches; sandy loam
Bt--15 to 28 inches; sandy loam
2BC--28 to 36 inches; loamy sand
2C--36 to 80 inches; sand

Additional Components

Malardi and similar soils: 0 to 20 percent of the unit

L3C--Rasset Sandy Loam, 6 To 12 Percent Slopes

Component Description

Rasset and similar soils
Extent: 70 to 100 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 15 inches; sandy loam
Bt--15 to 28 inches; sandy loam
2BC--28 to 36 inches; loamy sand
2C--36 to 80 inches; sand

L4B--Crowfork Loamy Sand, 1 To 6 Percent Slopes

Component Description

Crowfork and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 11 inches; loamy sand
E--11 to 20 inches; loamy fine sand
E&Bt--20 to 76 inches; loamy sand
C--76 to 80 inches; sand

L4C--Crowfork Loamy Sand, 6 To 12 Percent Slopes

Component Description

Crowfork and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 11 inches; loamy sand
E--11 to 20 inches; loamy fine sand
E&Bt--20 to 76 inches; loamy sand
C--76 to 80 inches; sand

L4D--Crowfork Loamy Sand, 12 To 18 Percent Slopes

Component Description

Crowfork and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 11 inches; loamy sand
E--11 to 20 inches; loamy fine sand
E&Bt--20 to 76 inches; loamy sand
C--76 to 80 inches; sand

Additional Components

Eden prairie and similar soils: 0 to 20 percent of the unit

L6A--Biscay Loam, 0 To 2 Percent Slopes

Component Description

Biscay and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A1,A2--0 to 20 inches; loam
Bg--20 to 28 inches; loam
2BCg--28 to 36 inches; gravelly loam
2Cg--36 to 60 inches; stratified gravelly coarse sand to loamy sand

L7A--Biscay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Biscay, depressional and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A1,A2--0 to 23 inches; loam
Bg--23 to 28 inches; loam
2BCg--28 to 36 inches; gravelly loam

2Cg--36 to 60 inches; stratified coarse sand to gravelly coarse sand to loamy sand to loamy sand

Additional Components

Biscay and similar soils: 0 to 20 percent of the unit

L8A--Darfur Sandy Loam, 0 To 2 Percent Slopes

Component Description

Darfur and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 16 inches; sandy loam
Bg--16 to 32 inches; sandy clay loam
Cg--32 to 80 inches; stratified sand to loamy fine sand to fine sandy loam

L9A--Minnetonka Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Minnetonka and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Moraine
Lake plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 13 inches; silty clay loam
Btg--13 to 35 inches; silty clay
Cg--35 to 60 inches; silty clay loam

L10B--Kasota Silty Clay Loam, 1 To 6 Percent Slopes

Component Description

Kasota and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on stream terrace

Hill on outwash plain
Position on landform:
Summit
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glaciolacustrine sediments over outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
Bt--10 to 28 inches; silty clay
2BC--28 to 32 inches; sand
2C--32 to 60 inches; coarse sand

L11B--Grays Very Fine Sandy Loam, 2 To 8 Percent Slopes

Component Description

Grays and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 2 to 8 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; very fine sandy loam
Bt--7 to 25 inches; silty clay loam
C--25 to 60 inches; stratified very fine sandy loam to silt loam

L12A--Muskego, Blue Earth And Houghton Soils, Ponded, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Muskego, frequently flooded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status: At the surface all year

Ponding is shallowest (depth, months):
1.0 foot January February March August
September October
Ponding is deepest (depth, months):
2.0 feet May June
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

Blue earth, frequently flooded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Coprogenous earth
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March August
September October
Ponding is deepest (depth, months):
2.0 feet May June
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
A--0 to 50 inches; silt loam
Cg--50 to 60 inches; silt loam

Houghton, frequently flooded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March August
September October
Ponding is deepest (depth, months):
2.0 feet May June
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
Oa--0 to 80 inches; muck

L13A--Klossner Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Klossner, drained and similar soils
Extent: 65 to 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions

Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 50.0 percent
Typical profile:
Op,Oa--0 to 26 inches; muck
2A1--26 to 36 inches; mucky silty clay loam
2A2--36 to 48 inches; silty clay loam
2Cg--48 to 80 inches; loam

Additional Components

Mineral soil, drained and similar soils: 5 to 20 percent of the unit

L14A--Houghton Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Houghton, drained and similar soils
Extent: 65 to 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Op--0 to 10 inches; muck
Oa--10 to 80 inches; muck

L15A--Klossner, Okoboji And Glencoe Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Klossner, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:

Organic material over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

Okoboji, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium or lacustrine sediments over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
A1--0 to 10 inches; mucky silty clay loam
A2--10 to 52 inches; silty clay loam
Bg--52 to 60 inches; silty clay loam

Glencoe, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
A--0 to 42 inches; silty clay loam
Bg--42 to 50 inches; clay loam
Cg--50 to 60 inches; loam

L16A--Muskego, Blue Earth And Houghton Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Muskego, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

Blue earth, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Coprogenous earth
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
A--0 to 50 inches; silt loam
Cg--50 to 60 inches; silt loam

Houghton, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
Oa--0 to 80 inches; muck

L17B--Angus-Malardi Complex, 2 To 6 Percent Slopes

Component Description

Angus and similar soils
Extent: 40 to 75 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

Malardi and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

L18A--Shields Silty Clay Loam, 0 To 3 Percent Slopes

Component Description

Shields and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam, silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciofluvial and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; silty clay loam, silty clay loam
BE,Btg--8 to 41 inches; silty clay, silty clay
2Bk--41 to 80 inches; silty clay loam, silty clay loam

L19B--Moon Loamy Fine Sand, 2 To 5 Percent Slopes

Component Description

Moon and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 5 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February June July
August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 46 inches; sandy clay loam
2C--46 to 60 inches; loam

Additional Components

Finchford and similar soils: 0 to 20 percent of the unit

L20B--Fedji Loamy Fine Sand, Silty Substratum, 2 To 8 Percent Slopes

Component Description

Fedji, silty substratum and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 8 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
3.3 feet May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 10 inches; loamy fine sand
Bw--10 to 30 inches; loamy fine sand
2Bw--30 to 39 inches; silty clay loam
2Bk--39 to 60 inches; silt loam

Additional Components

Finchford and similar soils: 0 to 20 percent of the unit

L21A--Canisteo Loam, 0 To 2 Percent Slopes

Component Description

Canisteo and similar soils
Extent: 75 to 90 percent of the unit

Geomorphic description:
Moraine
Position on landform:
Flats and rims of depressions
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 17 inches; loam
Bkg--17 to 36 inches; clay loam
Cg--36 to 80 inches; loam

Additional Components

Cordova and similar soils: 5 to 20 percent of the unit

L22C2--Lester Loam, Morainic, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 60 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Additional Components

Angus and similar soils: 10 to 20 percent of the unit

L22D2--Lester Loam, Morainic, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

L22E--Lester Loam, Morainic, 18 To 25 Percent Slopes

Component Description

Lester and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

Additional Components

Terril and similar soils: 5 to 20 percent of the unit

L22F--Lester Loam, Morainic, 25 To 35 Percent Slopes

Component Description

Lester and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Shoulder
Backslope
Slope range: 25 to 35 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

L23A--Cordova Loam, 0 To 2 Percent Slopes

Component Description

Cordova and similar soils
Extent: 80 to 95 percent of the unit

Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,AB--0 to 13 inches; loam
Btg--13 to 33 inches; clay loam
Cg--33 to 80 inches; loam

L24A--Glencoe Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Glencoe and similar soils
Extent: 85 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap--0 to 13 inches; loam
A2,Bg1--13 to 31 inches; clay loam
Bg2--31 to 45 inches; loam
Cg--45 to 80 inches; loam

L25A--Lesueur Loam, 1 To 3 Percent Slopes

Component Description

Le sueur and similar soils
Extent: 75 to 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):

1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2,AB--0 to 17 inches; loam
Bt--17 to 36 inches; clay loam
Bk--36 to 46 inches; loam
C--46 to 80 inches; loam

Additional Components

Cordova and similar soils: 5 to 20 percent of the unit

L26A--Shorewood Silty Clay Loam, 0 To 3 Percent Slopes

Component Description

Shorewood and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Moraine
Lake plain
Position on landform:
Slight rise
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Laucstrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; silty clay loam
Bt--17 to 39 inches; silty clay
2BCg,2Cg--39 to 60 inches; loam

L26B--Shorewood Silty Clay Loam, 3 To 6 Percent Slopes

Component Description

Shorewood and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Hill on moraine
Hill on lake plain
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; silty clay loam
Bt--17 to 39 inches; silty clay
2BCg,2Cg--39 to 60 inches; loam

L26C2--Shorewood Silty Clay Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Shorewood, eroded and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Hill on moraine
Hill on lake plain
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Laucstrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A,AB--0 to 17 inches; silty clay loam
Bt--17 to 39 inches; silty clay
2BCg,2Cg--39 to 60 inches; loam

L27A--Suckercreek Loam, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Suckercreek, frequently flooded and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Concave drainageways
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A--0 to 22 inches; loam
Cg--22 to 80 inches; loamy fine sand

L28A--Suckercreek Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Suckercreek, occasionally flooded and similar soils
Extent: 70 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:

Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.3 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A--0 to 12 inches; fine sandy loam
Cg--12 to 80 inches; fine sandy loam

L29A--Hanlon Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Hanlon, occasionally flooded and similar soils
Extent: 75 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
3.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A1,A2--0 to 40 inches; fine sandy loam
A3--40 to 63 inches; fine sandy loam
Bw--63 to 70 inches; sandy loam
Cg--70 to 80 inches; stratified sand to loamy fine sand to fine sandy loam

L30A--Medo Soils, Depressional, 0 To 1 Percent Slopes

Component Description

Medo, surface drained and similar soils
Extent: 50 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):

At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November
December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 14.3 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 27 inches; muck
2A--27 to 35 inches; mucky loam
2Bg--35 to 39 inches; sandy clay loam
2Cg--39 to 80 inches; gravelly loamy coarse sand

Medo, drained and similar soils
Extent: 0 to 40 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 14.3 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Op,Oa--0 to 27 inches; muck
2A--27 to 35 inches; mucky loam
2Bg--35 to 39 inches; sandy clay loam
2Cg--39 to 80 inches; gravelly loamy coarse sand

Additional Components

Mineral soil, drained and similar soils: 5 to 25 percent of the unit

L31A--Medo, Dassel And Biscay Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Medo, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:

Oa--0 to 20 inches; muck
2A--20 to 34 inches; loam
2AC,2Cg--34 to 60 inches; sand

Dassel, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A1,A3--0 to 23 inches; fine sandy loam
Bg--23 to 31 inches; stratified loamy fine sand to fine sandy loam
2Cg--31 to 60 inches; stratified coarse sand to loamy sand

Biscay, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A1,AB--0 to 24 inches; loam
Bg--24 to 29 inches; loam
2BCg,2Cg--29 to 60 inches; stratified gravelly coarse sand to loamy sand

L32D--Hawick Loamy Sand, 12 To 18 Percent Slopes

Component Description

Hawick and similar soils
Extent: 70 to 100 percent of the unit
Geomorphic description:
Escarpment
Position on landform:
Summit
Backslope
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash

Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 11 inches; loamy sand
Bw--11 to 15 inches; loamy sand
C--15 to 80 inches; stratified gravelly coarse sand to sand

Additional Components

Crowfork and similar soils: 0 to 20 percent of the unit

L32F--Hawick Loamy Sand, 18 To 40 Percent Slopes

Component Description

Hawick and similar soils
Extent: 70 to 100 percent of the unit
Geomorphic description:
Escarpment
Position on landform:
Backslope
Summit
Shoulder
Slope range: 18 to 40 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 11 inches; loamy sand
Bw--11 to 15 inches; loamy sand
C--15 to 80 inches; stratified gravelly coarse sand to sand

Additional Components

Crowfork and similar soils: 0 to 20 percent of the unit

L35A--Lerdal Loam, 1 To 3 Percent Slopes

Component Description

Lerdal and similar soils
Extent: 75 to 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciofluvial and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.6 feet November
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 13 inches; loam
Bt,Btg--13 to 47 inches; clay loam
Bk--47 to 60 inches; loam

L36A--Hamel Overwash-Hamel Complex, 1 To 4 Percent Slopes

Component Description

Hamel, overwash and similar soils
Extent: 40 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 13 inches; loam
A--13 to 29 inches; clay loam
Btg--29 to 50 inches; clay loam
Cg--50 to 80 inches; loam

Hamel and similar soils
Extent: 30 to 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 24 inches; loam
Btg--24 to 46 inches; clay loam
Cg--46 to 80 inches; loam

L37B--Angus Loam, Morainic, 2 To 5 Percent Slopes

Component Description

Angus and similar soils
Extent: 50 to 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September

Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

L38A--Rushriver Very Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Rushriver, occasionally flooded and similar soils
Extent: 70 to 85 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.3 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 46 inches; very fine sandy loam
C--46 to 80 inches; stratified coarse sand to silt loam

Additional Components

Oshawa, frequently flooded and similar soils: 10 to 20 percent of the unit

L39A--Minneiska Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Minneiska, occasionally flooded and similar soils
Extent: 65 to 80 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Slight rise
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
C--10 to 60 inches; stratified sand to silt loam

Additional Components

Rushriver, occasionally flooded and similar soils: 5 to 20 percent of the unit

L40B--Angus-Kilkenny Complex, 2 To 6 Percent Slopes

Component Description

Angus and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

Kilkenny and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.7 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 11 inches; clay loam
Bt--11 to 35 inches; clay loam
2Bk,2C--35 to 80 inches; loam

L41C2--Lester-Kilkenny Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 40 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Kilkenny, eroded and similar soils
Extent: 35 to 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; clay loam
Bt--9 to 53 inches; clay loam
2BC,2C--53 to 80 inches; loam

L41D2--Lester-Kilkenny Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 40 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Kilkenny, eroded and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:

Shoulder
Summit
Slope range: 12 to 18 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; clay loam
Bt--9 to 53 inches; clay loam
2BC,2C--53 to 80 inches; loam

L41E--Lester-Kilkenny Complex, 18 To 25 Percent Slopes

Component Description

Lester and similar soils
Extent: 40 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

Kilkenny and similar soils
Extent: 35 to 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
A--0 to 7 inches; clay loam

Bt--7 to 31 inches; clay loam
2Bk,2C--31 to 80 inches; loam

L41F--Lester-Kilkenny Complex, 25 To 35 Percent Slopes

Component Description

Lester and similar soils
Extent: 40 to 50 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Shoulder
Backslope
Slope range: 25 to 35 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

Kilkenny and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Summit
Shoulder
Slope range: 25 to 35 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
A--0 to 7 inches; clay loam
Bt--7 to 31 inches; clay loam
2Bk,2C--31 to 80 inches; loam

L42B--Kingsley-Gotham Complex, 2 To 6 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 60 to 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:

Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
A--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Gotham and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 18 inches; loamy sand
Bw,BC--18 to 40 inches; sand
C--40 to 80 inches; sand

L42C--Kingsley-Gotham Complex, 6 To 12 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 60 to 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
A--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Gotham and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:

Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 18 inches; loamy sand
Bw,BC--18 to 40 inches; sand
C--40 to 80 inches; sand

L42D--Kingsley-Gotham Complex, 12 To 18 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 60 to 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
A--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Gotham and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 12 to 18 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 18 inches; loamy sand
Bw,BC--18 to 40 inches; sand
C--40 to 80 inches; sand

L42E--Kingsley-Gotham Complex, 18 To 25 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 60 to 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 18 to 25 percent

Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
A--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Gotham and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 18 inches; loamy sand
Bw,BC--18 to 40 inches; sand
C--40 to 80 inches; sand

L42F--Kingsley-Gotham Complex, 25 To 35 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 60 to 85 percent of the unit
Geomorphic description:
Escarpment
Position on landform:
Shoulder
Backslope
Slope range: 25 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
A--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Gotham and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Escarpment
Position on landform:
Summit
Shoulder
Slope range: 25 to 35 percent

Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 18 inches; loamy sand
Bw,BC--18 to 40 inches; sand
C--40 to 80 inches; sand

L43A--Brouillett Loam, 0 To 2 Percent Slopes, Occassionally Flooded

Component Description

Brouillett, occasionally flooded and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap--0 to 14 inches; loam
A--14 to 36 inches; loam
Bg--36 to 44 inches; loam
Cg--44 to 60 inches; stratified loamy very fine sand to silt loam

L44A--Nessel Loam, 1 To 3 Percent Slopes

Component Description

Nessel and similar soils
Extent: 75 to 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:

Ap--0 to 6 inches; loam
Bt--6 to 38 inches; clay loam
C--38 to 80 inches; loam

L45A--Dundas-Cordova Complex, 0 To 3 Percent Slopes

Component Description

Dundas and similar soils
Extent: 50 to 75 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
E--9 to 15 inches; loam
Btg--15 to 40 inches; clay loam
Cg--40 to 80 inches; loam

Cordova and similar soils
Extent: 15 to 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,AB--0 to 13 inches; loam
Btg--13 to 33 inches; clay loam
Cg--33 to 80 inches; loam

L46A--Tomall Loam, 0 To 2 Percent Slopes

Component Description

Tomall and similar soils
Extent: 70 to 100 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:

Colluvium over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 33 inches; loam
Bw--33 to 42 inches; sandy loam
2Bw--42 to 47 inches; loamy coarse sand
2C--47 to 80 inches; gravelly loamy coarse sand

L47A--Eden Prairie Sandy Loam, 0 To 2 Percent Slopes

Component Description

Eden prairie and similar soils
Extent: 80 to 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 16 inches; sandy loam
2Bt--16 to 26 inches; loamy sand
2Bw,2C1,2C2--26 to 80 inches; sand

L47B--Eden Prairie Sandy Loam, 2 To 6 Percent Slopes

Component Description

Eden prairie and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 16 inches; sandy loam
2Bt--16 to 26 inches; loamy sand
2Bw,2C1,2C2--26 to 80 inches; sand

L47C--Eden Prairie Sandy Loam, 6 To 12 Percent Slopes

Component Description

Eden prairie and similar soils
Extent: 60 to 85 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 16 inches; sandy loam
2Bt--16 to 26 inches; loamy sand
2Bw,2C1,2C2--26 to 80 inches; sand

L49A--Klossner Soils, Depressional, 0 To 1 Percent Slopes

Component Description

Klossner, surface drained and similar soils
Extent: 50 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November
December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

Klossner, drained and similar soils
Extent: 0 to 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):

At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 50.0 percent
Typical profile:
Op,Oa--0 to 26 inches; muck
2A1--26 to 36 inches; mucky silty clay loam
2A2--36 to 48 inches; silty clay loam
2Cg--48 to 80 inches; loam

Additional Components

Mineral soil, drained and similar soils: 5 to 25 percent of the unit

L50A--Houghton And Muskego Soils, Depressional, 0 To 1 Percent Slopes

Component Description

Houghton, surface drained and similar soils
Extent: 20 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November
December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
Oa--0 to 80 inches; muck

Muskego, surface drained and similar soils
Extent: 20 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November
December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck

Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

L52C--Urban Land-Lester Complex, 2 To 18 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 18 percent
Parent material:
Loamy till
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Lester and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

L52E--Urban Land-Lester Complex, 18 To 35 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Moraine
Slope range: 18 to 35 percent
Parent material:
Loamy till
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Lester and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 18 to 35 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

L53B--Urban Land-Moon Complex, 2 To 8 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Moraine
Slope range: 2 to 8 percent
Parent material:
Loamy till
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Moon and similar soils
Extent: 15 to 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 5 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February June July
August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 46 inches; sandy clay loam
2C--46 to 60 inches; loam

L54A--Urban Land-Dundas Complex, 0 To 3 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Moraine
Slope range: 0 to 3 percent
Parent material:
Loamy till
Flooding: None

The Urban land component is mainly residential with 35 to 80

percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Dundas and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
E--9 to 15 inches; loam
Btg--15 to 40 inches; clay loam
Cg--40 to 80 inches; loam

L55B--Urban Land-Malardi Complex, 0 To 8 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 0 to 8 percent
Parent material:
Sandy and gravelly outwash
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Malardi and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

L55C--Urban Land-Malardi Complex, 8 To 18 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Slope range: 8 to 18 percent
Parent material:
Sandy and gravelly outwash
Flooding: None

The Urban land component is mainly residential with 35 to 80 percent of the mapunit covered by impervious surfaces. The majority of the area has been disturbed to some degree by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Malardi and similar soils
Extent: 0 to 20 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 8 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

L56A--Muskego And Klossner Soils, 0 To 1 Percent, Frequently Flooded

Component Description

Muskego, frequently flooded and similar soils
Extent: 30 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May

Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

Klossner, frequently flooded and similar soils
Extent: 30 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

L58B--Koronis-Kingsley Complex, 2 To 6 Percent Slopes

Component Description

Koronis and similar soils
Extent: 50 to 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 30 inches; sandy clay loam
Bk--30 to 60 inches; loam

Kingsley and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

L58C2--Koronis-Kingsley Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Koronis, eroded and similar soils
Extent: 50 to 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 30 inches; sandy clay loam
Bk--30 to 60 inches; loam

Kingsley and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Additional Components

Forestcity and similar soils: 0 to 20 percent of the unit

L58D2--Koronis-Kingsley Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Koronis, eroded and similar soils
Extent: 50 to 85 percent of the unit
Geomorphic description:

Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 30 inches; sandy clay loam
Bk--30 to 60 inches; loam

Kingsley and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Additional Components

Forestcity and similar soils: 0 to 20 percent of the unit

L58E--Koronis-Kingsley Complex, 18 To 25 Percent Slopes

Component Description

Koronis and similar soils
Extent: 50 to 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 18 to 25 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 10 inches; sandy loam
Bt--10 to 30 inches; sandy clay loam
Bk--30 to 60 inches; loam

Kingsley and similar soils
Extent: 20 to 35 percent of the unit

Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 18 to 25 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
A--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Additional Components

Forestcity and similar soils: 0 to 20 percent of the unit

L59A--Forestcity-Lundlake Depressional Complex, 0 To 3 Percent Slopes

Component Description

Forestcity and similar soils
Extent: 60 to 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Swales and drainageways
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A1--0 to 22 inches; fine sandy loam
A2,AB--22 to 43 inches; loam
2Btg--43 to 60 inches; sandy clay loam
2BCg--60 to 80 inches; sandy loam

Lundlake and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):

1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A1--0 to 20 inches; loam
A2,A3,AB--20 to 46 inches; loam
Bg--46 to 54 inches; sandy loam
Cg--54 to 60 inches; sandy loam

L60B--Angus-Moon Complex, 2 To 5 Percent Slopes

Component Description

Angus and similar soils
Extent: 60 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

Moon and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 5 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February June July August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 46 inches; sandy clay loam
2C--46 to 60 inches; loam

L61C2--Lester-Metea Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 50 to 80 percent of the unit
Geomorphic description:

Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Metea and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 46 inches; sandy clay loam
2C--46 to 60 inches; loam

L61D2--Lester-Metea Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 50 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Metea and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:

Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 46 inches; sandy clay loam
2C--46 to 60 inches; loam

L61E--Lester-Metea Complex, 18 To 25 Percent Slopes

Component Description

Lester and similar soils
Extent: 50 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

Metea and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
A--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 46 inches; sandy clay loam
2C--46 to 60 inches; loam

L62B--Koronis-Kingsley-Malardi Complex, 2 To 6 Percent Slopes

Component Description

Koronis and similar soils
Extent: 30 to 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 30 inches; sandy clay loam
Bk--30 to 60 inches; loam

Kingsley and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Malardi and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

L62C2--Koronis-Kingsley-Malardi Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Koronis, eroded and similar soils
Extent: 30 to 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 30 inches; sandy clay loam
Bk--30 to 60 inches; loam

Kingsley and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Malardi and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

L62D2--Koronis-Kingsley-Malardi Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Koronis, eroded and similar soils
Extent: 30 to 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 30 inches; sandy clay loam
Bk--30 to 60 inches; loam

Kingsley and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Malardi and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

L62E--Koronis-Kingsley-Malardi Complex, 18 To 35 Percent Slopes

Component Description

Koronis and similar soils

Extent: 30 to 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 18 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 10 inches; sandy loam
Bt--10 to 30 inches; sandy clay loam
Bk--30 to 60 inches; loam

Kingsley and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 18 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
A--0 to 7 inches; sandy loam
E--7 to 14 inches; sandy loam
Bt--14 to 34 inches; sandy loam
C--34 to 60 inches; sandy loam

Malardi and similar soils
Extent: 10 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 18 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 4.6 percent
Typical profile:
A--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

L64A--Tadkee-Tadkee, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Tadkee and similar soils
Extent: 20 to 70 percent of the unit

Geomorphic description:
Beach on moraine
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Beach sand over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 4.3 percent
Typical profile:
A--0 to 6 inches; loamy fine sand
Bg--6 to 34 inches; sand
2Cg--34 to 80 inches; loam

Tadkee, depressional and similar soils
Extent: 20 to 70 percent of the unit
Geomorphic description:
Beach on moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Beach sand over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 12.1 percent
Typical profile:
A--0 to 6 inches; mucky loamy fine sand
Bg--6 to 27 inches; sand
2Cg--27 to 80 inches; loam

L70C2--Lester-Malardi Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 50 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam

Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Malardi and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

L70D2--Lester-Malardi Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 50 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Malardi and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam

2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

L70E--Lester-Malardi Complex, 18 To 35 Percent Slopes

Component Description

Lester and similar soils
Extent: 50 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 18 to 35 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

Malardi and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 18 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 4.6 percent
Typical profile:
A--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

L71C--Metea Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Metea and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 46 inches; sandy clay loam
2C--46 to 60 inches; loam

Additional Components

Lester and similar soils: 5 to 20 percent of the unit

L72A--Lundlake Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Lundlake and similar soils
Extent: 85 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A1--0 to 20 inches; loam
A2,A3,AB--20 to 46 inches; loam
Bg--46 to 54 inches; sandy loam
Cg--54 to 60 inches; sandy loam

L110E--Lester-Ridgeton Complex, 18 To 25 Percent Slopes

Component Description

Lester and similar soils
Extent: 45 to 65 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Backslope
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

Ridgeton and similar soils
Extent: 20 to 40 percent of the unit

Geomorphic description:
Escarpment on moraine
Position on landform:
Backslope
Footslope
Slope range: 12 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Colluvium over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2,A3--0 to 32 inches; loam
Bw--32 to 40 inches; loam
C1,C2--40 to 80 inches; loam

L110F--Lester-Ridgeton Complex, 25 To 45 Percent Slopes

Component Description

Lester and similar soils
Extent: 45 to 65 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Shoulder
Backslope
Slope range: 25 to 45 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
A--0 to 6 inches; loam
Bt--6 to 25 inches; clay loam
C--25 to 60 inches; loam

Ridgeton and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Backslope
Footslope
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Colluvium over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2,A3--0 to 32 inches; loam
Bw--32 to 40 inches; loam
C1,C2--40 to 80 inches; loam

L131A--Litchfield Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Litchfield and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
1.3 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,A,AB--0 to 20 inches; loamy fine sand
Bw--20 to 33 inches; fine sand
BC--33 to 40 inches; very fine sandy loam
C--40 to 80 inches; loamy fine sand

L132A--Hamel-Glencoe, Depressional Complex, 0 To 3 Percent Slopes

Component Description

Hamel and similar soils
Extent: 40 to 80 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 24 inches; loam
Btg--24 to 46 inches; clay loam
Cg--46 to 80 inches; loam

Glencoe and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December

Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap--0 to 13 inches; loam
A2,Bg1--13 to 31 inches; clay loam
Bg2--31 to 45 inches; loam
Cg--45 to 80 inches; loam

Additional Components

Hamel, overwash and similar soils: 5 to 25 percent of the unit

M-W--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

Miscellaneous water map units are not naturally occuring water areas. They are constructed and include; sewage lagoons, storm water sediment basins with a permanent pool of water, and aquaculture ponds. This map unit is not soil, no interpretations assigned.

U1A--Urban Land-Udorthents, Wet Substratum Complex, 0 To 2 Percent Slopes

Component Description

Urban land
Extent: 65 to 100 percent of the unit
Geomorphic description:
Stream terrace
Moraine
Outwash plain
Slope range: 0 to 2 percent
Flooding: None

The Urban land component is mainly commercial, industrial or residental areas with 65 to 100 percent of the mapunit covered by impervious surfaces. The majority of the area was originally occupied by wet depressional soils, mineral or organic.

Udorthents, wet substratum
Extent: 15 to 35 percent of the unit
Geomorphic description:
Stream terrace
Moraine
Outwash plain
Position on landform:
Fill placed in depressions
Slope range: 0 to 2 percent
Parent material:
Variable soil material
Flooding: None

The Udorthents, wet substratum component comprises of fill material placed in wet depressional areas to match the adjoining upland landscape. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

U2A--Udorthents, Wet Substratum, 0 To 2 Percent Slopes

Component Description

Udorthents, wet substratum
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Stream terrace
Position on landform:
Fill placed in depressions
Slope range: 0 to 2 percent
Parent material:

Variable soil material
Flooding: None

The Udorthents, wet substratum component comprises of fill material placed in these wet depressional areas to match the adjoining upland landscape. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

U3B--Udorthents (cut And Fill Land), 0 To 6 Percent Slopes

Component Description

Udorthents (cut and fill land)
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 0 to 6 percent
Parent material:
Variable loamy material
Flooding: None

The Udorthents component, consists primarily of cut or fill operations to the landscape to level and or fill areas for development. The cut and or fill material is dominatly loamy soil material. Up to 30 percent of this map unit is covered by impervious surfaces. The majority of the area has been disturbed by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

U4A--Urban Land-Udipsamments (cut And Fill Land) Complex, 0 To 2 Percent Slopes

Component Description

Urban land
Extent: 65 to 85 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 0 to 2 percent
Flooding: None

The Urban land component is mainly industrial parks, office buildings, warehouses and railroad yards with 65 to 85 percent of the mapunit covered by impervious surfaces.

Udipsamments (cut and fill land)
Extent: 15 to 50 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 0 to 2 percent
Parent material:
Variable sandy material
Flooding: None

The Udipsamments component, comprises of nearly level areas that had minimal grading and the cut and fill material is dominatly the sandy parent material. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

U5A--Urban Land-Udorthents, Wet Substratum Complex, 0 To 2 Percent Slopes, Rarely Flooded

Component Description

Urban land
Extent: 35 to 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Flooding does not occur (months):
January February March July August September October November December

Flooding is most likely (frequency, months):
Rare April May June

The Urban land component is mainly commercial or residential with 35 to 80 percent of the mapunit covered by impervious surfaces. Because of the variability of the Urban land component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Udorthents, wet substratum
Extent: 15 to 50 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Fill placed in flood plains
Slope range: 0 to 2 percent
Parent material:
Variable soil material
Flooding does not occur (months):
January February March July August September October November December
Flooding is most likely (frequency, months):
Rare April May June

The Udorthents, wet substratum component comprises of fill material placed in wet flood plains to match the adjoining upland landscape. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

U6B--Urban Land-Udorthents (cut And Fill Land) Complex, 0 To 6 Percent Slopes

Component Description

Urban land
Extent: 35 to 80 percent of the unit
Geomorphic description:
Moraine
Slope range: 0 to 6 percent
Flooding: None

The Urban land component is mainly residential, industrial parks, office buildings, warehouses, railroad yards and freeway interchange areas with 35 to 80 percent of the mapunit covered by impervious surfaces.

Udorthents (cut and fill land)
Extent: 20 to 65 percent of the unit
Geomorphic description:
Moraine
Slope range: 0 to 6 percent
Parent material:
Variable loamy material
Flooding: None

The Udorthents component, consists primarily of cut or fill operations to the landscape to level and or fill areas for development. The cut and or fill material is dominatly loamy soil material. Up to 30 percent of this map unit is covered by impervious surfaces. The majority of the area has been disturbed by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

W--Water

Component Description

Water
Extent: 100 percent of the unit

This mapunit consists of natural occuring bodies of water or water that has been impounded by structures in natural waterways. They range in size from 1.5 acres to tens of thousands of acres. This map unit is not soil, no interpretations assigned.

Houston County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/26/2002

Soil Descriptions - Non Technical

82B--Redeye Loamy Sand, 1 To 6 Percent Slopes

Component Description

Redeye and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Summit
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 3 inches; loamy sand
E--3 to 18 inches; sand
Bw--18 to 26 inches; loamy sand
2Bt1-2--26 to 52 inches; sandy loam
2Cd--52 to 60 inches; sandy loam

82C--Redeye Loamy Sand, 6 To 12 Percent Slopes

Component Description

Redeye and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 3 inches; loamy sand
E--3 to 18 inches; sand
Bw--18 to 26 inches; loamy sand
2Bt1-2--26 to 52 inches; sandy loam
2Cd--52 to 60 inches; sandy loam

133B--Dalbo Silt Loam, 2 To 8 Percent Slopes

Component Description

Dalbo and similar soils
Extent: 85 percent of the unit

Geomorphic description:
Flat on moraine
Slope range: 2 to 8 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
A,E--0 to 6 inches; silt loam
Bt1..BC--6 to 41 inches; silty clay
C--41 to 60 inches; silt loam

133C--Dalbo Silt Loam, 8 To 15 Percent Slopes

Component Description

Dalbo and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Shoulder
Backslope
Slope range: 8 to 15 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
A,E--0 to 6 inches; silt loam
Bt1..BC--6 to 41 inches; silty clay
C--41 to 60 inches; silt loam

139B--Huntersville Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Huntersville and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Backslope
Footslope
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet (transitory) April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March July
August September October
November December

Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,E--0 to 12 inches; loamy fine sand
Bw--12 to 24 inches; loamy sand
2Bt--24 to 40 inches; sandy loam
2Cd1-2--40 to 80 inches; sandy loam

147--Spooner Silt Loam, 0 To 2 Percent Slopes

Component Description

Spooner and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; silt loam
Eg--8 to 13 inches; silt loam
Btg--13 to 20 inches; silt loam
Cg1..Cg3--20 to 80 inches; silt loam

158B--Zimmerman Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
A,E--0 to 16 inches; loamy fine sand
E'..E&Bt--16 to 60 inches; fine sand

158C--Zimmerman Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Shoulder

Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
A,E--0 to 16 inches; loamy fine sand
E'..E&Bt--16 to 80 inches; fine sand

167A--Baudette Silt Loam, 1 To 3 Percent Slopes

Component Description

Baudette and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Flat on lake plain
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
A--0 to 4 inches; silt loam
E--4 to 8 inches; very fine sandy loam
Bt1,Bt2--8 to 35 inches; silt loam
C--35 to 60 inches; silt loam

170--Blomford Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Blomford and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
A--0 to 5 inches; loamy fine sand
Eg--5 to 23 inches; loamy fine sand
2Btg1-2--23 to 55 inches; clay loam
2BCg,2Cg--55 to 80 inches; sandy clay loam

202--Meehan Loamy Sand, Map 22-30, 0 To 3 Percent Slopes

Component Description

Meehan and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on outwash plain
Swale on outwash plain
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April May
Wet soil moisture status is lowest (depth, months):
4.0 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 6 inches; loamy sand
Bw1..Bg--6 to 38 inches; loamy sand
Cg1,Cg2--38 to 80 inches; sand

207B--Nymore Loamy Sand, 2 To 6 Percent Slopes

Component Description

Nymore and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy sand
BA..Bw2--8 to 33 inches; sand
C--33 to 60 inches; sand

207C--Nymore Loamy Sand, 6 To 12 Percent Slopes

Component Description

Nymore and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches

Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy sand
BA..Bw2--8 to 33 inches; sand
C--33 to 60 inches; sand

207D--Nymore Loamy Sand, 12 To 20 Percent Slopes

Component Description

Nymore and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Shoulder
Slope range: 12 to 20 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy sand
BA..Bw2--8 to 33 inches; sand
C--33 to 60 inches; sand

260--Duelm Loamy Sand, 0 To 2 Percent Slopes

Component Description

Duelm and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Swale on valley train
Swale on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
3.5 feet January February September
November December
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,AB--0 to 16 inches; loamy sand
Bw1,Bw2--16 to 30 inches; coarse sand
C1,C2--30 to 80 inches; coarse sand

Additional Components

Isan and similar soils: 15 percent of the unit

261--Isan Loamy Sand, Depressional, 0 To 1 Percent Slopes

Component Description

Isan and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Loamy sand

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
A1..A3--0 to 11 inches; loamy sand
Bg--11 to 15 inches; loamy sand
Cg1..Cg3--15 to 80 inches; coarse sand

267B--Snellman Sandy Loam, 2 To 8 Percent Slopes

Component Description

Snellman and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
A--0 to 2 inches; sandy loam
E1,E2--2 to 16 inches; loamy sand
Bt1,Bt2--16 to 31 inches; sandy clay loam
Bk--31 to 41 inches; sandy loam
C--41 to 80 inches; sandy loam

346--Talmoon Loam, 0 To 2 Percent Slopes

Component Description

Talmoon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A--0 to 3 inches; loam
Eg--3 to 14 inches; very fine sandy loam
Btg1-2--14 to 55 inches; clay loam
Cg--55 to 80 inches; clay loam

406A--Dorset Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dorset and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt1,Bt2--11 to 20 inches; sandy loam
2Bk--20 to 38 inches; gravelly coarse sand
2C--38 to 80 inches; gravelly coarse sand

488--Becida Fine Sandy Loam, Morainic, 0 To 2 Percent Slopes, Stony

Component Description

Becida and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot (transitory) April May
Wet soil moisture status is lowest (depth, months):
3.5 feet (transitory) February
Ponding: None
Available water capacity to a depth of 60 inches: 5.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 5 inches; fine sandy loam
Eg--5 to 12 inches; loamy sand
E/B--12 to 29 inches; sandy loam
Btg..Bt2--29 to 65 inches; sandy loam
BCd--65 to 80 inches; fine sandy loam

526C--Steamboat-Two Inlets-Seelyeville Complex, Pitted, 0 To 15 Percent Slopes

Component Description

Steamboat and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 3 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
A--0 to 3 inches; sandy loam
E,E/B--3 to 35 inches; loamy sand
Bt--35 to 46 inches; sandy loam
C1,C2--46 to 80 inches; fine sandy loam

Two inlets and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Shoulder
Backslope
Slope range: 3 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

Seelyeville and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression on moraine
Position on landform:
Shoulder
Backslope
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Herbaceous organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot January February August
September
Ponding is deepest (depth, months):
1.5 feet April May June October November
December
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1,Oa2--0 to 18 inches; muck
Oa3..Oa5--18 to 60 inches; muck

526E--Steamboat-Two Inlets-Seelyeville Complex, Pitted, 0 To 35 Percent Slopes

Component Description

Steamboat and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Backslope
Slope range: 15 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:

Till
        Flooding: None
        Depth to wet soil moisture status: More than 6.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 8.2 inches
        Content of organic matter in the upper 10 inches: 0.8 percent
        Typical profile:
A--0 to 3 inches; sandy loam
E,E/B--3 to 35 inches; loamy sand
Bt--35 to 46 inches; sandy loam
C1,C2--46 to 80 inches; fine sandy loam

     Two inlets and similar soils
        Extent: 25 percent of the unit
        Geomorphic description:
Moraine
        Position on landform:
Shoulder
Backslope
        Slope range: 15 to 35 percent
        Surface layer texture: Loamy sand
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Excessively drained
        Parent material:
Outwash
        Flooding: None
        Depth to wet soil moisture status: More than 6.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 3.1 inches
        Content of organic matter in the upper 10 inches: 0.3 percent
        Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

     Seelyeville and similar soils
        Extent: 20 percent of the unit
        Geomorphic description:
Depression on moraine
        Slope range: 0 to 1 percent
        Surface layer texture: Muck
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Very poorly drained
        Parent material:
Herbaceous organic material
        Flooding: None
        Wet soil moisture status: At the surface all year
        Ponding is shallowest (depth, months):
0.5 foot   January February August
  September
        Ponding is deepest (depth, months):
1.5 feet   April May June October November
  December
        Available water capacity to a depth of 60 inches: 23.9 inches
        Content of organic matter in the upper 10 inches: 62.0 percent
        Typical profile:
Oa1,Oa2--0 to 18 inches; muck
Oa3..Oa5--18 to 60 inches; muck

540--Seelyeville Muck, Depressional, Map 22-30, 0 To 1 Percent Slopes

  Component Description

     Seelyeville and similar soils
        Extent: 90 percent of the unit
        Geomorphic description:
Depression on moraine
Depression on outwash plain
Depression on lake plain
        Slope range: 0 to 1 percent
        Surface layer texture: Muck
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Very poorly drained
        Parent material:
Herbaceous organic material

Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 10 inches; muck
Oa2..Oa5--10 to 80 inches; muck

541--Rifle Mucky Peat, Depressional, Map 22-30, 0 To 1 Percent Slopes

Component Description

Rifle and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Depression on outwash plain
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Herbaceous organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 31.7 inches
Content of organic matter in the upper 10 inches: 87.0 percent
Typical profile:
Oe1--0 to 14 inches; mucky peat
Oe2,Oe3--14 to 60 inches; mucky peat

545--Rondeau Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Rondeau and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on outwash plain
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over marl
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 21.8 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:

Oa..Oa3--0 to 44 inches; muck
Cg1,Cg2--44 to 60 inches; marl

567A--Verndale Sandy Loam, 0 To 2 Percent Slopes

Component Description

Verndale and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt1,Bt2--9 to 19 inches; sandy loam
2Bw1-2--19 to 49 inches; coarse sand
2C--49 to 60 inches; sand

574G--Steamboat-Two Inlets Complex, Pitted, 35 To 65 Percent Slopes

Component Description

Steamboat and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Backslope
Slope range: 35 to 65 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
A--0 to 3 inches; sandy loam
E,E/B--3 to 35 inches; loamy sand
Bt--35 to 46 inches; sandy loam
C1,C2--46 to 80 inches; fine sandy loam

Two inlets and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Shoulder
Backslope
Slope range: 35 to 65 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:

A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

628--Talmoon Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Talmoon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 32.5 percent
Typical profile:
Oa--0 to 10 inches;
Eg--10 to 15 inches; very fine sandy loam
Btg1-2--15 to 55 inches; clay loam
Cg--55 to 80 inches; clay loam

672--Willosippi Loam, 0 To 2 Percent Slopes

Component Description

Willosippi and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
Ap--0 to 7 inches; loam
Eg--7 to 12 inches; fine sandy loam
Btg1-4--12 to 32 inches;
BCg..Cg3--32 to 60 inches;

675C--Two Inlets-Eagleview-Steamboat Complex, Pitted, 3 To 15 Percent Slopes

Component Description

Two inlets and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:

Summit
Shoulder
Slope range: 3 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

Eagleview and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Slope range: 3 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 4 inches; loamy sand
E,Bw--4 to 28 inches; sand
E&Bt--28 to 45 inches; sand
C1,C2--45 to 80 inches; sand

Additional Components

Steamboat and similar soils: 20 percent of the unit

675E--Two Inlets-Eagleview-Steamboat Complex, Pitted, 15 To 35 Percent Slopes

Component Description

Two inlets and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Shoulder
Slope range: 15 to 35 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

Eagleview and similar soils
Extent: 25 percent of the unit

Geomorphic description:
Moraine
Position on landform:
Backslope
Slope range: 15 to 35 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 4 inches; loamy sand
E,Bw--4 to 28 inches; sand
E&Bt--28 to 45 inches; sand
C1,C2--45 to 80 inches; sand

Steamboat and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Footslope
Backslope
Slope range: 15 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
A--0 to 3 inches; sandy loam
E,E/B--3 to 35 inches; loamy sand
Bt--35 to 46 inches; sandy loam
C1,C2--46 to 80 inches; fine sandy loam

675G--Two Inlets-Eagleview-Steamboat Complex, Pitted, 35 To 65 Percent Slopes

Component Description

Two inlets and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Shoulder
Slope range: 35 to 65 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

Eagleview and similar soils
Extent: 30 percent of the unit

Geomorphic description:
Moraine
Position on landform:
Backslope
Slope range: 35 to 65 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 4 inches; loamy sand
E,Bw--4 to 28 inches; sand
E&Bt--28 to 45 inches; sand
C1,C2--45 to 80 inches; sand

Steamboat and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Footslope
Backslope
Slope range: 35 to 65 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
A--0 to 3 inches; sandy loam
E,E/B--3 to 35 inches; loamy sand
Bt--35 to 46 inches; sandy loam
C1,C2--46 to 80 inches; fine sandy loam

701--Runeberg Mucky Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Runeberg and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Depression on drumlin
Slope range: 0 to 1 percent
Surface layer texture: Mucky loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A--0 to 10 inches; mucky loam
Bg1..Bg3--10 to 36 inches; sandy loam
Cg1,Cg2--36 to 60 inches; sandy loam

709B--Lengby Fine Sandy Loam, 2 To 8 Percent Slopes

Component Description

Lengby and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 2 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; fine sandy loam
E--3 to 11 inches; loamy fine sand
B/E..Bt2--11 to 26 inches; loam
C1..C3--26 to 48 inches;
C4--48 to 60 inches;

709C--Lengby Fine Sandy Loam, 8 To 15 Percent Slopes

Component Description

Lengby and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Position on landform:
Backslope
Shoulder
Slope range: 8 to 15 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; fine sandy loam
E--3 to 11 inches; loamy fine sand
B/E..Bt2--11 to 26 inches; loam
C1..C3--26 to 48 inches;
C4--48 to 60 inches;

719B--Rondeau Muck, Seepland, 1 To 6 Percent Slopes

Component Description

Rondeau and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Flat on outwash plain
Rise on outwash plain
Slope range: 1 to 6 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over marl

Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
2.0 feet September
Ponding does not occur (months):
January February March July August September October
November December
Ponding is deepest (depth, months):
0.2 foot April May June
Available water capacity to a depth of 60 inches: 16.8 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa,Oe--0 to 20 inches; muck
Oa'..Cg2--20 to 80 inches; marl

731A--Sanburn Loamy Sand, 0 To 3 Percent Slopes

Component Description

Sanburn and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
A,E1--0 to 6 inches; loamy sand
E2--6 to 15 inches; loamy sand
Bt--15 to 21 inches; sandy loam
2BC..2C2--21 to 60 inches; sand

744B--Debs-Akeley Complex, 1 To 8 Percent Slopes

Component Description

Debs and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Lake plain
Moraine
Position on landform:
Shoulder
Summit
Slope range: 1 to 8 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
A--0 to 2 inches; silt loam
E--2 to 12 inches; very fine sandy loam
Bt1,Bt2--12 to 32 inches; silty clay loam
C--32 to 60 inches; silt loam

Akeley and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Lake plain
Moraine
Position on landform:

Backslope
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over glaciolacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw,E--3 to 49 inches; sand
2Bt--49 to 56 inches; silt loam
2C1..2C3--56 to 80 inches;

746--Haslie Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Haslie and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on outwash plain
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.2 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 18.9 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 12 inches; muck
Oa2--12 to 30 inches; muck
Cg1..Cg3--30 to 80 inches; mucky silt loam

775B--Sugarbush-Two Inlets Complex, 1 To 8 Percent Slopes

Component Description

Sugarbush and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Summit
Backslope
Slope range: 1 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; sandy loam

E--3 to 13 inches; loamy sand
Bt--13 to 25 inches; sandy loam
2C--25 to 80 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 10 inches; gravelly loamy coarse sand
Bt--10 to 33 inches; gravelly loamy coarse sand
C--33 to 60 inches; gravelly coarse sand

775C--Sugarbush-Two Inlets Complex, 8 To 15 Percent Slopes

Component Description

Sugarbush and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 13 inches; loamy sand
Bt--13 to 25 inches; sandy loam
2C--25 to 80 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches

Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 10 inches; gravelly loamy coarse sand
Bt--10 to 33 inches; gravelly loamy coarse sand
C--33 to 60 inches; gravelly coarse sand

778B--Dorset-Corliss Complex, 1 To 6 Percent Slopes

Component Description

Dorset and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Valley train
Position on landform:
Summit
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt1,Bt2--11 to 20 inches; sandy loam
2Bk--20 to 38 inches; gravelly coarse sand
2C--38 to 80 inches; gravelly coarse sand

Corliss and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Slope range: 1 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; loamy coarse sand
Bw--7 to 11 inches; gravelly loamy coarse sand
Bk..C4--11 to 60 inches; gravelly coarse sand

778C--Dorset-Corliss Complex, 6 To 12 Percent Slopes

Component Description

Dorset and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash

Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt1,Bt2--11 to 20 inches; sandy loam
2Bk--20 to 38 inches; gravelly coarse sand
2C--38 to 80 inches; gravelly coarse sand

Corliss and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Slope range: 6 to 12 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; loamy coarse sand
Bw--7 to 11 inches; gravelly loamy coarse sand
Bk..C4--11 to 60 inches; gravelly coarse sand

797--Mooselake And Lupton Soils, 0 To 1 Percent Slopes

Component Description

Lupton and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Depression on moraine
Depression on outwash plain
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Woody organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August September
Ponding: None
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 80.0 percent
Typical profile:
Oa1--0 to 10 inches; muck
Oa2..Oa4--10 to 80 inches; muck

Mooselake and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Depression on moraine
Depression on outwash plain
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Woody organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May

June July October November
December
Wet soil moisture status is lowest (depth, months):
0.5 foot August September
Ponding is shallowest (depth, months):
0.5 foot January September December
Ponding is deepest (depth, months):
1.0 foot February March April May June
July August October November
Available water capacity to a depth of 60 inches: 26.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oe1--0 to 10 inches; mucky peat
Oe2..Oe4--10 to 80 inches; mucky peat

799--Seelyeville And Bowstring Soils, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Seelyeville and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Herbaceous organic material
Flooding is least likely (frequency, months):
Rare January February August
September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
1.0 foot September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 12 inches; muck
Oa2..Oa5--12 to 80 inches; muck

Bowstring and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over alluvium
Flooding is least likely (frequency, months):
Rare January February August
September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
1.0 foot September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 21.4 inches
Content of organic matter in the upper 10 inches: 65.0 percent
Typical profile:
Oa1,Oa2--0 to 38 inches; muck
Cg--38 to 47 inches;
Oa'--47 to 80 inches; muck

820B--Potatolake Very Fine Sandy Loam, 1 To 8 Percent Slopes

Component Description

Potatolake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on outwash plain
Flat on moraine
Slope range: 1 to 8 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
Ap--0 to 9 inches; very fine sandy loam
E--9 to 15 inches; very fine sandy loam
Bt1,Bt2--15 to 30 inches; silty clay loam
2Bk..2C2--30 to 80 inches; stratified silt loam to gravelly coarse sand

820C--Potatolake Very Fine Sandy Loam, 8 To 15 Percent Slopes

Component Description

Potatolake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Lake plain
Outwash plain
Position on landform:
Footslope
Backslope
Slope range: 8 to 15 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits and/or outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
Ap--0 to 9 inches; very fine sandy loam
E--9 to 15 inches; very fine sandy loam
Bt1,Bt2--15 to 30 inches; silty clay loam
2Bk..2C2--30 to 80 inches; stratified silt loam to gravelly coarse sand

831C--Akeley-Debs Complex, 8 To 15 Percent Slopes

Component Description

Akeley and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Lake plain
Position on landform:
Shoulder

Backslope
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over glaciolacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw,E--3 to 49 inches; sand
2Bt--49 to 56 inches; silt loam
2C1..2C3--56 to 80 inches;

Debs and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Lake plain
Position on landform:
Backslope
Summit
Slope range: 8 to 15 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
A--0 to 2 inches; silt loam
E--2 to 12 inches; very fine sandy loam
Bt1,Bt2--12 to 32 inches; silty clay loam
C--32 to 60 inches; silt loam

831E--Akeley-Debs Complex, 15 To 35 Percent Slopes

Component Description

Akeley and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Moraine
Lake plain
Position on landform:
Shoulder
Backslope
Slope range: 15 to 35 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over glaciolacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw,E--3 to 49 inches; sand
2Bt--49 to 56 inches; silt loam
2C1..2C3--56 to 80 inches;

Debs and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine

Lake plain
Position on landform:
Backslope
Summit
Slope range: 15 to 35 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
A--0 to 2 inches; silt loam
E--2 to 12 inches; very fine sandy loam
Bt1,Bt2--12 to 32 inches; silty clay loam
C--32 to 60 inches; silt loam

844B--Sanburn-Graycalm Complex, 3 To 8 Percent Slopes

Component Description

Sanburn and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 3 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
A,E1--0 to 6 inches; loamy sand
E2--6 to 15 inches; loamy sand
Bt--15 to 21 inches; sandy loam
2BC..2C2--21 to 60 inches; sand

Graycalm and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Shoulder
Backslope
Slope range: 3 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

867B--Graycalm-Menahga Complex, 1 To 8 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

Menahga and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Shoulder
Backslope
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw--3 to 17 inches; loamy sand
C1..C3--17 to 80 inches; sand

867C--Graycalm-Menahga Complex, 8 To 15 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

Menahga and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Shoulder
Backslope
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw--3 to 17 inches; loamy sand
C1..C3--17 to 80 inches; sand

867E--Graycalm-Menahga Complex, 15 To 30 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Slope range: 15 to 30 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

Menahga and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 15 to 30 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw--3 to 17 inches; loamy sand
C1..C3--17 to 80 inches; sand

867F--Graycalm-Menahga Complex, 30 To 45 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Slope range: 30 to 45 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

Menahga and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 30 to 45 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw--3 to 17 inches; loamy sand
C1..C3--17 to 80 inches; sand

1015--Udipsamments (cut And Fill Land)

Component Description

Udipsamments
Extent: 90 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Slope range: 0 to 10 percent
Surface layer texture: Sand
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.2 percent
Typical profile:
H1--0 to 14 inches; sand
H2--14 to 60 inches; sand
H3--60 to 80 inches; coarse sand

1016--Udorthents, Loamy (cut And Fill Land)

Component Description

Udorthents
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Lake plain
Slope range: 0 to 50 percent
Drainage class: Well drained
Parent material:
Glaciolacustrine deposits and/or till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Typical profile:
H1--0 to 60 inches;
H2--60 to 80 inches;

1021C--Graycalm-Sanburn Complex, 8 To 15 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

Sanburn and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
A,E1--0 to 6 inches; loamy sand
E2--6 to 15 inches; loamy sand
Bt--15 to 21 inches; sandy loam
2BC..2C2--21 to 60 inches; sand

1027--Udorthents, Wet Substratum (fill Land)

Component Description

Udorthents
Extent: 90 percent of the unit
Geomorphic description:
Moraine

Lake plain
Outwash plain
Slope range: 0 to 5 percent
Parent material:
Earthflow deposits over organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April May
Wet soil moisture status is lowest (depth, months):
4.0 feet September
Ponding: None

1030--Pits, Gravel-Udipsamments Complex

Component Description

Pits, gravel
Extent: 50 percent of the unit
Geomorphic description:
Moraine
Lake plain
Outwash plain
Slope range: 0 to 50 percent
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None

Udipsamments
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Lake plain
Outwash plain
Slope range: 1 to 50 percent
Surface layer texture: Sand
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.2 percent
Typical profile:
H1--0 to 14 inches; sand
H2--14 to 60 inches; sand
H3--60 to 80 inches; coarse sand

1111--Nidaros Muck, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Nidaros and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding is least likely (frequency, months):
Rare January February August
September December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
1.0 foot September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 15.2 inches

Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa1..Oa3--0 to 32 inches; muck
A1,A2--32 to 38 inches; sandy loam
2Cg--38 to 60 inches; sand

1113--Haslie, Seelyeville, And Cathro Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Cathro and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression on moraine
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over glaciolacustrine deposits and/or till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March September November December
Ponding is deepest (depth, months):
1.5 feet April May June July August October
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
Oa1--0 to 23 inches; muck
Oa2..Cg--23 to 60 inches; clay loam

Haslie and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression on moraine
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March September November December
Ponding is deepest (depth, months):
1.5 feet April May June July August October
Available water capacity to a depth of 60 inches: 16.8 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1,Oa2--0 to 20 inches; muck
Cg1..Cg3--20 to 60 inches; mucky silt loam

Seelyeville and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Herbaceous organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March September November December
Ponding is deepest (depth, months):

1.5 feet April May June July August
October
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1,Oa2--0 to 18 inches; muck
Oa3..Oa5--18 to 60 inches; muck

1126B--Verndale-Nymore Complex, 1 To 6 Percent Slopes

Component Description

Verndale and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt1,Bt2--9 to 19 inches; sandy loam
2Bw1-2--19 to 49 inches; coarse sand
2C--49 to 60 inches; sand

Nymore and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Shoulder
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy sand
BA..Bw2--8 to 33 inches; sand
C--33 to 60 inches; sand

1127A--Bootlake-Graycalm Complex, 0 To 2 Percent Slopes

Component Description

Bootlake and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 7 inches; loamy sand
Bt--7 to 13 inches; sandy loam
2Bw--13 to 47 inches; coarse sand
2C--47 to 80 inches; coarse sand

Graycalm and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

1127B--Bootlake-Graycalm Complex, 2 To 8 Percent Slopes

Component Description

Bootlake and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Footslope
Backslope
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 7 inches; loamy sand
Bt--7 to 13 inches; sandy loam
2Bw--13 to 47 inches; coarse sand
2C--47 to 80 inches; coarse sand

Graycalm and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 2 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand

Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

1136--Nidaros Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Nidaros and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 14.1 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa1,Oa2--0 to 27 inches; muck
A1,A2--27 to 38 inches; sandy loam
2Cg--38 to 80 inches; sand

1164--Zerkel Loam, 1 To 3 Percent Slopes

Component Description

Zerkel and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on moraine
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
A--0 to 4 inches; loam
E--4 to 10 inches; very fine sandy loam
B/E..Bt2--10 to 29 inches; loam
Bk--29 to 37 inches;
C--37 to 80 inches;

1200--Egglake Loam, 0 To 2 Percent Slopes

Component Description

Egglake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A--0 to 4 inches; loam
E--4 to 9 inches; fine sandy loam
Btg--9 to 25 inches; sandy clay loam
Bg,Bkg--25 to 80 inches; coarse sandy loam

1230--Haslie And Nidaros Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Haslie and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Depression on outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March September
November December
Ponding is deepest (depth, months):
1.5 feet April May June July August
October
Available water capacity to a depth of 60 inches: 21.8 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1,Oa2--0 to 44 inches; muck
Cg1..Cg3--44 to 60 inches; mucky silt loam

Nidaros and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Depression on outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Sandy clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
1.0 foot January February March September
November December
Ponding is deepest (depth, months):
1.5 feet April May June July August
October
Available water capacity to a depth of 60 inches: 18.5 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa1,Oa2--0 to 38 inches;
A1,A2--38 to 54 inches; sandy clay loam
2Cg--54 to 60 inches; sand

1238E--Two Inlets-Sugarbush Complex, 15 To 30 Percent Slopes

Component Description

Two inlets and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 15 to 30 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 10 inches; gravelly loamy coarse sand
Bt--10 to 33 inches; gravelly loamy coarse sand
C--33 to 60 inches; gravelly coarse sand

Sugarbush and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Backslope
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 13 inches; loamy sand
Bt--13 to 25 inches; sandy loam
2C--25 to 80 inches; gravelly coarse sand

1238F--Two Inlets-Sugarbush Complex, 30 To 45 Percent Slopes

Component Description

Two inlets and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 30 to 45 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 10 inches; gravelly loamy coarse sand
Bt--10 to 33 inches; gravelly loamy coarse sand

C--33 to 60 inches; gravelly coarse sand

Sugarbush and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Backslope
Slope range: 30 to 45 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 13 inches; loamy sand
Bt--13 to 25 inches; sandy loam
2C--25 to 80 inches; gravelly coarse sand

1244B--Sol-Sugarbush Complex, 2 To 8 Percent Slopes, Very Stony

Component Description

Sol and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 4 inches; sandy loam
E--4 to 17 inches; loamy sand
B/E,Bt--17 to 43 inches; sandy clay loam
C--43 to 80 inches; fine sandy loam

Sugarbush and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Shoulder
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 12 inches; loamy sand
Bt--12 to 25 inches; sandy loam

2C--25 to 60 inches; gravelly coarse sand

1244C--Sol-Sugarbush Complex, 8 To 15 Percent Slopes, Very Stony

Component Description

Sol and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 4 inches; sandy loam
E--4 to 17 inches; loamy sand
B/E,Bt--17 to 43 inches; sandy clay loam
C--43 to 80 inches; fine sandy loam

Sugarbush and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Shoulder
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 12 inches; loamy sand
Bt--12 to 25 inches; sandy loam
2C--25 to 60 inches; gravelly coarse sand

1244E--Sol-Sugarbush Complex, 15 To 30 Percent Slopes, Very Stony

Component Description

Sol and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches

Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 4 inches; sandy loam
E--4 to 17 inches; loamy sand
B/E,Bt--17 to 43 inches; sandy clay loam
C--43 to 80 inches; fine sandy loam

Sugarbush and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Shoulder
Backslope
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 12 inches; loamy sand
Bt--12 to 25 inches; sandy loam
2C--25 to 60 inches; gravelly coarse sand

1247D--Corliss-Dorset Complex, 12 To 20 Percent Slopes

Component Description

Corliss and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 12 to 20 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; loamy coarse sand
Bw--7 to 11 inches; gravelly loamy coarse sand
Bk..C4--11 to 60 inches; gravelly coarse sand

Dorset and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Footslope
Backslope
Slope range: 12 to 20 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt1,Bt2--11 to 20 inches; sandy loam
2Bk--20 to 38 inches; gravelly coarse sand
2C--38 to 80 inches; gravelly coarse sand

1248C--Nymore-Verndale Complex, 6 To 12 Percent Slopes

Component Description

Nymore and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy sand
BA..Bw2--8 to 33 inches; sand
C--33 to 60 inches; sand

Verndale and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt1,Bt2--9 to 19 inches; sandy loam
2Bw1-2--19 to 49 inches; coarse sand
2C--49 to 60 inches; sand

1249C--Graycalm-Bootlake Complex, 8 To 15 Percent Slopes

Component Description

Graycalm and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Summit
Shoulder
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash

Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy sand
Bw1,Bw2--3 to 20 inches; sand
E--20 to 39 inches; sand
E&Bt--39 to 80 inches; sand

Bootlake and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Backslope
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; sandy loam
E--3 to 7 inches; loamy sand
Bt--7 to 13 inches; sandy loam
2Bw--13 to 47 inches; coarse sand
2C--47 to 80 inches; coarse sand

1271--Roscommon Mucky Loamy Sand, Depressional, Map 22-30, 0 To 1 Percent Slopes

Component Description

Roscommon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on outwash plain
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciofluvial deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
2.5 feet September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 5.9 percent
Typical profile:
A--0 to 6 inches; mucky loamy sand
Cg1,Cg2--6 to 80 inches; sand

1272B--Sol Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Sol and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
A--0 to 3 inches; fine sandy loam
E--3 to 14 inches; fine sandy loam
B/E,Bt--14 to 38 inches; sandy clay loam
C--38 to 60 inches; fine sandy loam

1294--Nary Fine Sandy Loam, 1 To 3 Percent Slopes

Component Description

Nary and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
A--0 to 3 inches; fine sandy loam
E--3 to 15 inches; loamy fine sand
B/E,Bt--15 to 36 inches; sandy clay loam
C--36 to 60 inches; sandy loam

1319B--Rockwood Sandy Loam, 2 To 6 Percent Slopes, Stony

Component Description

Rockwood and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Shoulder
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
E--8 to 16 inches; sandy loam
BE1,BE2--16 to 37 inches; sandy loam
Bt--37 to 46 inches; sandy loam
Cd--46 to 60 inches; sandy loam

1319C--Rockwood Sandy Loam, 6 To 12 Percent Slopes, Stony

Component Description

Rockwood and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
E--8 to 16 inches; sandy loam
BE1,BE2--16 to 37 inches; sandy loam
Bt--37 to 46 inches; sandy loam
Cd--46 to 60 inches; sandy loam

1319D--Rockwood Sandy Loam, 12 To 20 Percent Slopes, Stony

Component Description

Rockwood and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Shoulder
Backslope
Slope range: 12 to 20 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
E--8 to 16 inches; sandy loam
BE1,BE2--16 to 37 inches; sandy loam
Bt--37 to 46 inches; sandy loam
Cd--46 to 60 inches; sandy loam

1320B--Blowers Sandy Loam, 1 To 5 Percent Slopes, Stony

Component Description

Blowers and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Backslope
Footslope
Slope range: 1 to 5 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):

3.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 6 inches; sandy loam
E,E/B--6 to 17 inches; sandy loam
B/E--17 to 27 inches; sandy loam
Bt,BC--27 to 40 inches; sandy loam
Cd--40 to 60 inches; sandy loam

1321--Paddock-Becida Complex, 0 To 2 Percent Slopes, Stony

Component Description

Paddock and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Toeslope
Footslope
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 8 inches; fine sandy loam
EB--8 to 15 inches; sandy loam
Bt1..BC--15 to 40 inches; sandy loam
Cd1,Cd2--40 to 60 inches; sandy loam

Becida and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Swale
Position on landform:
Footslope
Toeslope
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot (transitory) April May
Wet soil moisture status is lowest (depth, months):
3.5 feet (transitory) February
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 4.4 percent
Typical profile:
Ap--0 to 8 inches; loam
Eg--8 to 13 inches; fine sandy loam
E/B--13 to 27 inches; sandy loam
Btg..Bt2--27 to 58 inches; sandy loam
BCd--58 to 80 inches; sandy loam

1332B--Rockwood Fine Sandy Loam, Morainic, 3 To 8 Percent Slopes, Stony

Component Description

Rockwood and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Backslope
Slope range: 3 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam
E--7 to 16 inches; loamy sand
BE1,BE2--16 to 37 inches; sandy loam
Bt,Cd--37 to 80 inches; sandy loam

1332C--Rockwood Fine Sandy Loam, Morainic, 8 To 15 Percent Slopes, Stony

Component Description

Rockwood and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Shoulder
Backslope
Slope range: 8 to 15 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam
E--7 to 16 inches; loamy sand
BE1,BE2--16 to 37 inches; sandy loam
Bt,Cd--37 to 80 inches; sandy loam

1332E--Rockwood Fine Sandy Loam, Morainic, 15 To 30 Percent Slopes, Stony

Component Description

Rockwood and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Shoulder
Backslope
Slope range: 15 to 30 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam
E--7 to 16 inches; loamy sand
BE1,BE2--16 to 37 inches; sandy loam
Bt,Cd--37 to 80 inches; sandy loam

1334--Huntersville Loamy Sand, 1 To 3 Percent Slopes

Component Description

Huntersville and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet (transitory) April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy sand
E..2Bt--8 to 38 inches; loamy sand
2Cd1--38 to 65 inches; sandy loam
2Cd2--65 to 80 inches; sandy loam

1336--Blowers Fine Sandy Loam, Morainic, 1 To 3 Percent Slopes, Stony

Component Description

Blowers and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet (transitory) April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 5 inches; fine sandy loam
E..B/E--5 to 23 inches; sandy loam
Bt,BC--23 to 47 inches; sandy loam
Cd--47 to 80 inches; sandy loam

1356--Water, Miscellaneous

Additional Components

Water: 100 percent of the unit

1421B--Rockwood-Two Inlets, Morainic, Complex, 3 To 8 Percent Slopes

Component Description

Rockwood and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Backslope
Slope range: 3 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam
E--7 to 16 inches; loamy sand
BE1,BE2--16 to 37 inches; sandy loam
Bt,Cd--37 to 80 inches; sandy loam

Two inlets and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Shoulder
Backslope
Slope range: 3 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

1421C--Rockwood-Two Inlets, Morainic, Complex, 8 To 15 Percent Slopes, Stony

Component Description

Rockwood and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 8 to 15 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:

Ap--0 to 7 inches; fine sandy loam
E--7 to 16 inches; loamy sand
BE1,BE2--16 to 37 inches; sandy loam
Bt,Cd--37 to 80 inches; sandy loam

Two inlets and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Shoulder
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

1421E--Rockwood-Two Inlets, Morainic, Complex, 15 To 30 Percent Slopes, Stony

Component Description

Rockwood and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 15 to 30 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam
E--7 to 16 inches; loamy sand
BE1,BE2--16 to 37 inches; sandy loam
Bt,Cd--37 to 80 inches; sandy loam

Two inlets and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Shoulder
Slope range: 15 to 30 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 0.3 percent

Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 9 inches; gravelly loamy coarse sand
Bt--9 to 19 inches; gravelly loamy coarse sand
C--19 to 80 inches; gravelly coarse sand

1438B--Braham Loamy Fine Sand, Moderately Wet, 2 To 6 Percent Slopes

Component Description

Braham and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2BE.2Bt2--24 to 42 inches; sandy clay loam
2Bk--42 to 60 inches; loam

1439--Cathro Muck, Depressional, Map 22-30, 0 To 1 Percent Slopes

Component Description

Cathro and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Depression on moraine
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over glaciolacustrine deposits and/or till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 20.9 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
Oa1--0 to 12 inches; muck
Oa2--12 to 43 inches; muck
A,Cg--43 to 80 inches; sandy loam

1440B--Redeye Loamy Sand, Morainic, 3 To 8 Percent Slopes

Component Description

Redeye and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Summit
Backslope
Slope range: 3 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
A--0 to 5 inches; loamy sand
E,Bw--5 to 31 inches; sand
2Bt1-2--31 to 43 inches; sandy loam
2Cd--43 to 80 inches; sandy loam

1440C--Redeye Loamy Sand, Morainic, 8 To 15 Percent Slopes

Component Description

Redeye and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Shoulder
Backslope
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
A--0 to 5 inches; loamy sand
E,Bw--5 to 31 inches; sand
2Bt1-2--31 to 43 inches; sandy loam
2Cd--43 to 80 inches; sandy loam

1444--Wurtsmith Loamy Sand, Map 22-30, 0 To 3 Percent Slopes

Component Description

Wurtsmith and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat on outwash plain
Rise on outwash plain
Flat on lake plain
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet December
Ponding: None

Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Ap--0 to 6 inches; loamy sand
Bw1,Bw2--6 to 20 inches; sand
BC..Cg--20 to 80 inches; sand

1445--Markey Muck, Depressional, Map 22-30, 0 To 1 Percent Slopes

Component Description

Markey and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Depression on lake plain
Depression on outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May June October November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May June October
Available water capacity to a depth of 60 inches: 12.4 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa1,Oa2--0 to 26 inches; muck
Cg1,Cg2--26 to 80 inches; sand

1447--Beltrami Very Fine Sandy Loam, 1 To 3 Percent Slopes

Component Description

Beltrami and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
A--0 to 6 inches; very fine sandy loam
E--6 to 12 inches; very fine sandy loam
Bt1..BC--12 to 39 inches; clay loam
C1,C2--39 to 80 inches; loam

1450B--Sanburn Very Stony Loamy Sand, 1 To 8 Percent Slopes, Bouldery

Component Description

Sanburn and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Outwash plain
Valley train

Position on landform:
Backslope
Summit
Slope range: 1 to 8 percent
Surface layer texture: Very stony loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 4 inches; very stony loamy sand
E1,E2--4 to 17 inches; loamy sand
Bt--17 to 24 inches; sandy loam
2BC..2C2--24 to 80 inches; sand

1450C--Sanburn Very Stony Loamy Sand, 8 To 15 Percent Slopes, Bouldery

Component Description

Sanburn and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Backslope
Summit
Slope range: 8 to 15 percent
Surface layer texture: Very stony loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 4 inches; very stony loamy sand
E1,E2--4 to 17 inches; loamy sand
Bt--17 to 24 inches; sandy loam
2BC..2C2--24 to 80 inches; sand

1450E--Sanburn Very Stony Loamy Sand, 15 To 30 Percent Slopes, Bouldery

Component Description

Sanburn and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Valley train
Outwash plain
Position on landform:
Summit
Backslope
Slope range: 15 to 30 percent
Surface layer texture: Very stony loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 4 inches; very stony loamy sand
E1,E2--4 to 17 inches; loamy sand

Bt--17 to 24 inches; sandy loam
2BC..2C2--24 to 80 inches; sand

1460B--Nebish Very Fine Sandy Loam, Moderately Wet, 2 To 6 Percent Slopes

Component Description

Nebish and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
A--0 to 6 inches; very fine sandy loam
E--6 to 12 inches; very fine sandy loam
Bt1,Bt2--12 to 32 inches; loam
BC..C2--32 to 80 inches; loam

1460C--Nebish Very Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Nebish and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
A--0 to 5 inches; very fine sandy loam
E--5 to 14 inches; fine sandy loam
Bt1..BC--14 to 39 inches; loam
C1,C2--39 to 80 inches; loam

1943--Roscommon Loamy Sand, Map 22-30, 0 To 2 Percent Slopes

Component Description

Roscommon and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Swale on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciofluvial deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April May June
Wet soil moisture status is lowest (depth, months):
3.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
A--0 to 6 inches; loamy sand
Cg1,Cg2--6 to 60 inches; sand

1956--Staples Loamy Sand, 0 To 2 Percent Slopes

Component Description

Staples and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Swale on moraine
Swale on drumlin
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot (transitory) April May
Wet soil moisture status is lowest (depth, months):
3.5 feet (transitory) February
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
A--0 to 7 inches; loamy sand
Eg1..Eg3--7 to 36 inches; sand
2Btg--36 to 44 inches; sandy loam
2Cd1-2--44 to 60 inches; sandy loam

1968--Evart Loam, 0 To 1 Percent Slopes, Occasionally Flooded

Component Description

Evart and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
July August September October
Flooding is most likely (frequency, months):
Occasional March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May
Wet soil moisture status is lowest (depth, months):
2.0 feet September
Ponding does not occur (months):
January February July August September October
Ponding is deepest (depth, months):
0.5 foot April May
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,A--0 to 11 inches; loam

Cg1..Cg5--11 to 60 inches; sand

1969--Evart-Isan Complex, Channeled, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Evart and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Depression on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding is least likely (frequency, months):
Rare January February July August September October November December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet September
Ponding does not occur (months):
August September
Ponding is deepest (depth, months):
0.5 foot April May October
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,A--0 to 11 inches; loam
Cg1..Cg5--11 to 60 inches; sand

Isan and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding does not occur (months):
July August September
Flooding is most likely (frequency, months):
Frequent April May
Wet soil moisture status is highest (depth, months):
0.5 foot April May June
Wet soil moisture status is lowest (depth, months):
2.0 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
A1..A3--0 to 13 inches; loamy sand
Bg--13 to 30 inches; sand
Cg1..Cg3--30 to 60 inches; sand

W--Water

Additional Components

Water: 100 percent of the unit

Isanti County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Itasca County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

27B--Dickinson Sandy Loam, 1 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 18 inches; sandy loam
H2--18 to 47 inches; sandy loam
H3--47 to 60 inches; sand

27C--Dickinson Sandy Loam, 6 To 12 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 18 inches; sandy loam
H2--18 to 47 inches; sandy loam
H3--47 to 60 inches; sand

35--Blue Earth, Mucky Silt Loam

Component Description

Blue earth and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 12.5 percent

Typical profile:
H1--0 to 10 inches; mucky silt loam
H2--10 to 40 inches; mucky silt loam
H3--40 to 60 inches; silty clay loam

39A--Wadena Loam, 0 To 2 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 32 inches; loam
H3--32 to 60 inches; stratified gravelly coarse sand to gravelly sand

39B--Wadena Loam, 2 To 6 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 32 inches; loam
H3--32 to 60 inches; stratified sand to gravelly coarse sand

41A--Estherville Sandy Loam, 0 To 2 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 20 inches; sandy loam
H3--20 to 60 inches; gravelly coarse sand

41B--Estherville Sandy Loam, 2 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent

Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 20 inches; sandy loam
H3--20 to 60 inches; gravelly coarse sand

41C--Estherville Sandy Loam, 6 To 12 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 20 inches; sandy loam
H3--20 to 60 inches; gravelly coarse sand

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; clay loam
H2--23 to 40 inches; clay loam
H3--40 to 60 inches; loam

94B--Terril Loam, 2 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August

Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 22 inches; loam
H2--22 to 36 inches; loam
H3--36 to 60 inches; loam

96--Collinwood Silty Clay

Component Description

Collinwood and similar soils
Extent: 90 percent of the unit
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 21 inches; silty clay
H2--21 to 31 inches; silty clay
H3--31 to 60 inches; silty clay loam

101B--Truman Silty Clay Loam, 2 To 6 Percent Slopes

Component Description

Truman and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; silty clay loam
H2--14 to 29 inches; silty clay loam
H3--29 to 60 inches; silt loam

102B--Clarion Loam, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 27 inches; loam
H3--27 to 60 inches; loam

102B2--Clarion Loam, 4 To 8 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 90 percent of the unit
Slope range: 4 to 8 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 27 inches; loam
H3--27 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 41 inches; clay loam
H3--41 to 60 inches; clay loam

114--Glencoe Clay Loam

Component Description

Glencoe and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 9 inches; clay loam

H2--9 to 39 inches; clay loam
H3--39 to 50 inches; loam
H4--50 to 60 inches; loam

118--Crippin Clay Loam

Component Description

Crippin and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 31 inches; clay loam
H3--31 to 60 inches; loam

130--Nicollet Clay Loam

Component Description

Nicollet and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 23 inches; clay loam
H2--23 to 29 inches; clay loam
H3--29 to 60 inches; clay loam

197--Kingston Silty Clay Loam

Component Description

Kingston and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; silty clay loam
H2--15 to 22 inches; silty clay loam
H3--22 to 60 inches; silty clay loam

211--Lura Silty Clay

Component Description

Lura and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay
H2--10 to 60 inches; silty clay

229--Waldorf Silty Clay

Component Description

Waldorf and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; silty clay
H2--23 to 40 inches; silty clay
H3--40 to 60 inches; silty clay loam

255--Mayer Loam

Component Description

Mayer and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 28 inches; sandy loam

H3--28 to 60 inches; gravelly coarse sand

313--Spillville Loam, Occasionally Flooded

Component Description

Spillville and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 56 inches; loam
H2--56 to 60 inches; loam

327B--Dickman Sandy Loam, 1 To 6 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 60 inches; sand

327C--Dickman Sandy Loam, 6 To 12 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 60 inches; sand

336--Delft Clay Loam

Component Description

Delft and similar soils
Extent: 95 percent of the unit

Geomorphic description:
Swale
Slope range: 1 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 28 inches; clay loam
H3--28 to 38 inches; clay loam
H4--38 to 60 inches; clay loam

362--Millington Clay Loam, Frequently Flooded

Component Description

Millington and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 35 inches; clay loam
H3--35 to 60 inches; stratified sandy loam to silty clay loam

392--Biscay Clay Loam

Component Description

Biscay and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; clay loam
H2--23 to 30 inches; clay loam
H3--30 to 60 inches; stratified gravelly coarse sand to loamy
sand

539--Palms Muck

Component Description

Palms and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 14.9 inches
Content of organic matter in the upper 10 inches: 21.0 percent
Typical profile:
H1--0 to 19 inches; muck
H2--19 to 60 inches; clay loam

595E--Swanlake Loam, 18 To 25 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 90 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

595F--Swanlake Loam, 25 To 40 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 90 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

664--Zook Silty Clay, Frequently Flooded

Component Description

Zook and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent

Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 44 inches; silty clay
H2--44 to 60 inches; silty clay loam

813--Spicer-Lura Complex

Component Description

Spicer and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; silty clay loam
H2--23 to 43 inches; silty clay loam
H3--43 to 60 inches; silty clay loam

Lura and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay
H2--10 to 60 inches; silty clay

887C--Clarion-Swanlake Loams, 6 To 12 Percent Slopes

Component Description

Clarion and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 27 inches; loam
H3--27 to 60 inches; loam

Swanlake and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

887D--Clarion-Swanlake Loams, 12 To 18 Percent Slopes

Component Description

Clarion and similar soils
Extent: 55 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 27 inches; loam
H3--27 to 60 inches; loam

Swanlake and similar soils
Extent: 40 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

921C2--Clarion-Storden Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 27 inches; loam
H3--27 to 60 inches; loam

Storden and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 28 inches; loam
H3--28 to 60 inches; loam

956--Canisteo-Glencoe Clay Loams

Component Description

Canisteo and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; clay loam
H2--23 to 40 inches; clay loam
H3--40 to 60 inches; clay loam

Glencoe and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 39 inches; clay loam
H3--39 to 50 inches; clay loam
H4--50 to 60 inches; clay loam

960D2--Storden-Clarion Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 45 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 28 inches; loam
H3--28 to 60 inches; loam

Clarion and similar soils
Extent: 40 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 27 inches; loam
H3--27 to 60 inches; loam

1030--Udorthents-Pits Complex

Component Description

Orthents
Extent: 70 percent of the unit

Pits
Extent: 30 percent of the unit

1051--Glencoe Clay Loam, Ponded

Component Description

Glencoe and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 39 inches; clay loam
H2--39 to 50 inches; clay loam
H3--50 to 60 inches; clay loam

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

1833--Coland Clay Loam, Occasionally Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 36 inches; clay loam
H2--36 to 60 inches; loam

1834--Coland Loam, Frequently Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 36 inches; loam
H2--36 to 60 inches; loam

1852F--Terril-Swanlake Loams, 25 To 40 Percent Slopes

Component Description

Terril and similar soils
Extent: 55 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 22 inches; loam
H2--22 to 36 inches; loam
H3--36 to 60 inches; clay loam

Swanlake and similar soils
Extent: 25 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

1907--Lakefield Silty Clay Loam

Component Description

Lakefield and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 60 inches; silty clay loam

1914--Lura Silty Clay, Nearly Level

Component Description

Lura and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 48 inches; silty clay
H2--48 to 60 inches; silty clay

W--Water

Component Description

Water
Extent: 100 percent of the unit

Kanabec County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

27B--Dickinson Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 16 inches; fine sandy loam
H2--16 to 29 inches; fine sandy loam
H3--29 to 60 inches; fine sand

35--Blue Earth Mucky Silt Loam

Component Description

Blue earth and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Relict lakebed
Slope range: 0 to 5 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 10 inches; mucky silt loam
H2--10 to 60 inches; mucky silt loam

39--Wadena Loam

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 27 inches; loam

H3--27 to 60 inches; coarse sand

41A--Estherville Coarse Sandy Loam, 0 To 3 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; coarse sandy loam
H2--13 to 19 inches; loam
H3--19 to 60 inches; gravelly coarse sand

84--Brownton Silty Clay Loam

Component Description

Brownton and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 34 inches; silty clay
H3--34 to 60 inches; clay loam

94--Terril Loam

Component Description

Terril and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 37 inches; loam
H2--37 to 45 inches; loam
H3--45 to 60 inches; loam

106B--Lester Loam, 2 To 8 Percent Slopes

Component Description

Lester and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 28 inches; clay loam
H3--28 to 60 inches; loam

110--Marna Silty Clay

Component Description

Marna and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; silty clay
H2--20 to 36 inches; clay
H3--36 to 60 inches; clay loam

112--Harps Clay Loam

Component Description

Harps and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Rim on depression
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 32 inches; loam
H3--32 to 60 inches; loam

113--Webster Silty Clay Loam

Component Description

Webster and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 20 inches; silty clay loam
H2--20 to 28 inches; clay loam
H3--28 to 60 inches; clay loam

114--Glencoe Clay Loam

Component Description

Glencoe and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 39 inches; clay loam
H2--39 to 44 inches; loam
H3--44 to 60 inches; loam

130A--Nicollet Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Nicollet and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 29 inches; clay loam
H3--29 to 60 inches; loam

130B--Nicollet Clay Loam, 2 To 5 Percent Slopes

Component Description

Nicollet and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 21 inches; loam
H3--21 to 60 inches; loam

134--Okoboji Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 32 inches; silty clay loam
H3--32 to 60 inches; silt loam

140--Spicer Silty Clay Loam

Component Description

Spicer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 32 inches; silt loam
H3--32 to 60 inches; silt loam

230A--Guckeen Clay Loam, 0 To 2 Percent Slopes

Component Description

Guckeen and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 28 inches; clay
H3--28 to 60 inches; clay loam

230B--Guckeen Clay Loam, 2 To 6 Percent Slopes

Component Description

Guckeen and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 28 inches; clay
H3--28 to 60 inches; clay loam

238B--Kilkenny Clay Loam, 2 To 6 Percent Slopes

Component Description

Kilkenny and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 36 inches; clay loam
H3--36 to 60 inches; loam

238C--Kilkenny Clay Loam, 6 To 12 Percent Slopes

Component Description

Kilkenny and similar soils

Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 36 inches; clay loam
H3--36 to 60 inches; loam

336--Delft Loam

Component Description

Delft and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 21 inches; loam
H2--21 to 30 inches; loam
H3--30 to 36 inches; loam
H4--36 to 60 inches; sandy loam

392--Biscay Loam

Component Description

Biscay and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; loam
H2--18 to 28 inches; loam
H3--28 to 60 inches; gravelly coarse sand

399--Biscay Loam, Depressional

Component Description

Biscay and similar soils

Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 21 inches; loam
H2--21 to 30 inches; loam
H3--30 to 60 inches; gravelly coarse sand

413--Osakis Sandy Loam

Component Description

Osakis and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 18 inches; sandy loam
H3--18 to 40 inches; gravelly coarse sand
H4--40 to 60 inches; coarse sand

423--Seaforth Loam

Component Description

Seaforth and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 19 inches; loam
H3--19 to 60 inches; loam

444--Canisteo Silty Clay Loam

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Rim on depression
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; silty clay loam
H2--17 to 27 inches; silty clay loam
H3--27 to 60 inches; loam

446A--Normania Loam, 0 To 2 Percent Slopes

Component Description

Normania and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 25 inches; loam
H3--25 to 60 inches; loam

446B--Normania Loam, 2 To 5 Percent Slopes

Component Description

Normaniia and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 25 inches; loam
H3--25 to 60 inches; loam

447--Harpster Silty Clay Loam

Component Description

Harpster and similar soils
Extent: 90 percent of the unit
Geomorphic description:

Rim on depression
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; silty clay loam
H2--17 to 26 inches; silty clay loam
H3--26 to 60 inches; silt loam

462E--Sunburg Fine Sandy Loam, 18 To 25 Percent Slopes

Component Description

Sunburg and similar soils
Extent: 85 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; fine sandy loam
H2--7 to 60 inches; fine sandy loam

523--Houghton Muck

Component Description

Houghton and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
H1--0 to 60 inches; muck

525--Muskego Muck

Component Description

Muskego and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 16.2 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 19 inches; muck
H2--19 to 60 inches; coprogenous earth

539--Palms Muck

Component Description

Palms and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.3 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 27 inches; muck
H2--27 to 42 inches; silty clay loam
H3--42 to 60 inches; loam

548--Palms Muck, Sandy Substratum

Component Description

Palms and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 14.2 inches
Content of organic matter in the upper 10 inches: 35.0 percent
Typical profile:
H1--0 to 27 inches; muck
H2--27 to 39 inches; sandy clay loam
H3--39 to 60 inches; gravelly loamy coarse sand

559--Lena Muck

Component Description

Lena and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 79.5 percent
Typical profile:
H1--0 to 60 inches; muck

566--Regal Loam

Component Description

Regal and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly coarse sand

611D--Hawick Gravelly Loamy Coarse Sand, 12 To 20 Percent Slopes

Component Description

Hawick and similar soils
Extent: 90 percent of the unit
Slope range: 12 to 20 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 11 inches; gravelly loamy coarse sand
H2--11 to 16 inches; gravelly loamy coarse sand
H3--16 to 60 inches; gravelly coarse sand

611F--Hawick Gravelly Loamy Coarse Sand, 20 To 35 Percent Slopes

Component Description

Hawick and similar soils

Extent: 90 percent of the unit
Slope range: 20 to 35 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 11 inches; gravelly loamy coarse sand
H2--11 to 16 inches; gravelly loamy coarse sand
H3--16 to 60 inches; gravelly coarse sand

613--Grovecity Loam

Component Description

Grovecity and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 27 inches; fine sandy loam
H3--27 to 60 inches; fine sandy loam

804B--Koronis-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Koronis and similar soils
Extent: 65 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 29 inches; sandy clay loam
H3--29 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; gravelly loamy coarse sand
H2--10 to 22 inches; gravelly loamy coarse sand
H3--22 to 60 inches; gravelly coarse sand

804C--Koronis-Hawick Complex, 6 To 12 Percent Slopes

Component Description

Koronis and similar soils
Extent: 65 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 29 inches; sandy clay loam
H3--29 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; gravelly loamy coarse sand
H2--10 to 22 inches; gravelly loamy coarse sand
H3--22 to 60 inches; gravelly coarse sand

804D--Koronis-Hawick Complex, 12 To 20 Percent Slopes

Component Description

Koronis and similar soils
Extent: 65 percent of the unit
Slope range: 12 to 20 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 29 inches; sandy clay loam
H3--29 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 12 to 20 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; gravelly loamy coarse sand
H2--10 to 22 inches; gravelly loamy coarse sand
H3--22 to 60 inches; gravelly coarse sand

804E--Koronis-Hawick Complex, 20 To 30 Percent Slopes

Component Description

Koronis and similar soils
Extent: 65 percent of the unit
Slope range: 20 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 29 inches; sandy clay loam
H3--29 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 20 to 30 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; gravelly loamy coarse sand
H2--10 to 22 inches; gravelly loamy coarse sand
H3--22 to 60 inches; gravelly coarse sand

805B--Wadenill-Sunburg Loams, 2 To 6 Percent Slopes

Component Description

Wadenill and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 31 inches; sandy loam
H3--31 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 25 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; fine sandy loam

805C--Sunburg-Wadenill Complex, 6 To 12 Percent Slopes

Component Description

Sunburg and similar soils

Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; fine sandy loam

Wadenill and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 31 inches; fine sandy loam
H3--31 to 60 inches; fine sandy loam

805D--Sunburg-Wadenill Complex, 12 To 18 Percent Slopes

Component Description

Sunburg and similar soils
Extent: 70 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; fine sandy loam

Wadenill and similar soils
Extent: 20 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; fine sandy loam
H2--10 to 31 inches; fine sandy loam
H3--31 to 60 inches; fine sandy loam

806C--Guckeen-Arkton Complex, 4 To 12 Percent Slopes

Component Description

Guckeen and similar soils
Extent: 60 percent of the unit
Slope range: 4 to 12 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 26 inches; clay
H3--26 to 60 inches; clay loam

Arkton and similar soils
Extent: 25 percent of the unit
Slope range: 4 to 12 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; clay
H2--9 to 27 inches; clay
H3--27 to 60 inches; clay loam

806D--Guckeen-Arkton Complex, 12 To 18 Percent Slopes

Component Description

Guckeen and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 26 inches; clay
H3--26 to 60 inches; clay loam

Arkton and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December

Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; clay
H2--9 to 22 inches; clay
H3--22 to 60 inches; clay loam

807B--Koronis-Sunburg Complex, 2 To 6 Percent Slopes

Component Description

Koronis and similar soils
Extent: 65 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 26 inches; sandy clay loam
H3--26 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; fine sandy loam

807C--Koronis-Sunburg Complex, 6 To 12 Percent Slopes

Component Description

Koronis and similar soils
Extent: 60 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 26 inches; sandy clay loam
H3--26 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent

Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; fine sandy loam

807D--Koronis-Sunburg Complex, 12 To 20 Percent Slopes

Component Description

Koronis and similar soils
Extent: 55 percent of the unit
Slope range: 12 to 20 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 26 inches; sandy clay loam
H3--26 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 20 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; fine sandy loam

807E--Koronis-Sunburg Complex, 20 To 30 Percent Slopes

Component Description

Koronis and similar soils
Extent: 50 percent of the unit
Slope range: 20 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 26 inches; sandy clay loam
H3--26 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 40 percent of the unit
Slope range: 20 to 30 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; fine sandy loam

809--Lowlein-Estherville Sandy Loams

Component Description

Lowlein and similar soils
Extent: 65 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 14 inches; sandy loam
H2--14 to 24 inches; sandy loam
H3--24 to 31 inches; loamy sand
H4--31 to 60 inches; loam

Estherville and similar soils
Extent: 20 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly coarse sand

810--Coriff-Fieldon Complex

Component Description

Coriff and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 24 inches; sandy loam
H3--24 to 33 inches; loamy fine sand
H4--33 to 60 inches; loam

Fieldon and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; fine sandy loam
H2--17 to 27 inches; fine sandy loam
H3--27 to 60 inches; fine sand

817--Canisteo-Seaforth Complex

Component Description

Canisteo and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 30 inches; silty clay loam
H3--30 to 60 inches; loam

Seaforth and similar soils
Extent: 30 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 19 inches; loam
H3--19 to 60 inches; loam

819B--Regal-Hawick Complex, 0 To 4 Percent Slopes

Component Description

Regal and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches

Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 60 inches; gravelly coarse sand

Hawick and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; gravelly loamy coarse sand
H2--10 to 60 inches; sand

833B--Wadenill-Sunburg-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Wadenill and similar soils
Extent: 40 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 24 inches; sandy loam
H3--24 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 30 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy coarse sand
H2--10 to 14 inches; loamy coarse sand
H3--14 to 60 inches; coarse sand

833C--Sunburg-Wadenill-Hawick Complex, 6 To 12 Percent Slopes

Component Description

Sunburg and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Wadenill and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 24 inches; sandy loam
H3--24 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy coarse sand
H2--10 to 14 inches; loamy coarse sand
H3--14 to 60 inches; coarse sand

833D--Sunburg-Wadenill-Hawick Complex, 12 To 18 Percent Slopes

Component Description

Sunburg and similar soils
Extent: 45 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Wadenill and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 24 inches; sandy loam
H3--24 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy coarse sand
H2--10 to 14 inches; loamy coarse sand
H3--14 to 60 inches; coarse sand

833E--Sunburg-Wadenill-Hawick Complex, 18 To 35 Percent Slopes

Component Description

Sunburg and similar soils
Extent: 50 percent of the unit
Slope range: 18 to 35 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 18 to 35 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy coarse sand
H2--10 to 14 inches; loamy coarse sand
H3--14 to 60 inches; coarse sand

Wadenill and similar soils
Extent: 20 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 24 inches; loam
H3--24 to 60 inches; fine sandy loam

842--Urban Land-Udorthents Complex

Component Description

Urban land
Extent: 50 percent of the unit

Udorthents
Extent: 40 percent of the unit
Slope range: 0 to 10 percent
Surface layer texture: Loam
Drainage class: Well drained
Flooding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 60 inches; loam

875B--Estherville-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 18 inches; sandy loam
H3--18 to 60 inches; coarse sand

Hawick and similar soils
Extent: 25 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 12 inches; loamy coarse sand
H2--12 to 60 inches; gravelly coarse sand

875C--Hawick-Estherville Complex, 6 To 12 Percent Slopes

Component Description

Hawick and similar soils
Extent: 65 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; gravelly loamy coarse sand
H2--10 to 60 inches; gravelly coarse sand

Estherville and similar soils
Extent: 20 percent of the unit

Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly coarse sand

897B--Seaforth-Swanlake Loams, 2 To 6 Percent Slopes

Component Description

Seaforth and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 21 inches; loam
H3--21 to 60 inches; loam

Swanlake and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

899--Harps-Okoboji Complex

Component Description

Harps and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Rim on depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None

Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 27 inches; loam
H3--27 to 60 inches; loam

Okoboji and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 36 inches; silty clay loam
H3--36 to 60 inches; silt loam

927--Harps-Seaforth-Okoboji Complex

Component Description

Harps and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Rim on depression
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 31 inches; loam
H3--31 to 60 inches; loam

Okoboji and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:

H1--0 to 26 inches; silty clay loam
H2--26 to 60 inches; silty clay loam

Seaforth and similar soils
Extent: 25 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 22 inches; loam
H3--22 to 60 inches; loam

954B--Ves-Swanlake Loams, 2 To 6 Percent Slopes

Component Description

Ves and similar soils
Extent: 65 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 20 inches; clay loam
H3--20 to 60 inches; loam

Swanlake and similar soils
Extent: 25 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

954C--Swanlake-Ves Loams, 6 To 12 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

Ves and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 20 inches; loam
H3--20 to 60 inches; loam

954D--Swanlake-Ves Loams, 12 To 18 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

Ves and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 20 inches; loam
H3--20 to 60 inches; loam

981--Canisteo-Harps Loams

Component Description

Canisteo and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 21 inches; loam
H3--21 to 29 inches; loam
H4--29 to 60 inches; loam

Harps and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Rim on depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 28 inches; loam
H3--28 to 60 inches; loam

999B--Ves-Swanlake-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Ves and similar soils
Extent: 40 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 23 inches; loam
H3--23 to 60 inches; loam

Swanlake and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 60 inches; loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy coarse sand
H2--10 to 21 inches; loamy coarse sand
H3--21 to 60 inches; gravelly coarse sand

999C--Swanlake-Ves-Hawick Complex, 6 To 12 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 60 inches; loam

Ves and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 23 inches; clay loam
H3--23 to 60 inches; loam

Hawick and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy sand
H2--10 to 21 inches; loamy sand
H3--21 to 60 inches; sand

1016--Udorthents, Loamy

Component Description

Udorthents and similar soils
Extent: 90 percent of the unit

Slope range: 0 to 10 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 60 inches; loam

1029--Pits, Gravel

Component Description

Pits
Extent: 90 percent of the unit

1055--Aquolls And Histosols, Ponded

Component Description

Aquolls and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 30 inches; loam
H2--30 to 60 inches; loam

Histosols and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 16.0 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 20 inches; muck
H2--20 to 50 inches; coprogenous earth
H3--50 to 60 inches; loam

1065B--Aquolls And Histosols, Sloping

Component Description

Aquolls and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):

1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 60 inches; loam

Histosols and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 4 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 17.1 inches
Content of organic matter in the upper 10 inches: 79.5 percent
Typical profile:
H1--0 to 30 inches; muck
H2--30 to 60 inches; loam

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

Miscellaneous water map units are not naturally occuring water areas. They are constructed and include; sewage lagoons, storm water sediment basins with a permanent pool of water, and aquaculture ponds. This map unit is not soil, no interpretations assigned.

1900--Okoboji-Canisteo Silty Clay Loams, Depressional

Component Description

Okoboji and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 32 inches; silty clay loam
H2--32 to 43 inches; silty clay loam
H3--43 to 60 inches; silt loam

Canisteo and similar soils

Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; silty clay loam
H2--17 to 30 inches; silt loam
H3--30 to 60 inches; loam

1908--Biscay-Palms Complex

Component Description

Biscay and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 26 inches; sandy clay loam
H3--26 to 60 inches; gravelly coarse sand

Palms and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 35.0 percent
Typical profile:
H1--0 to 21 inches; muck
H2--21 to 29 inches; loam
H3--29 to 60 inches; sand

W--Water

Additional Components

Water: 100 percent of the unit

Kittson County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Koochiching County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

31D2--Storden Loam, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 70 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 5 inches; loam
H2--5 to 60 inches; loam

Swanlake and similar soils
Extent: 15 percent of the unit

34--Parnell Silty Clay Loam, Depressional

Component Description

Parnell and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 38 inches; silty clay
H3--38 to 60 inches; silty clay loam

47--Colvin Silty Clay Loam

Component Description

Colvin and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained

Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 25 inches; silty clay loam
H3--25 to 60 inches; silty clay loam

51--La Prairie Loam, Occasionally Flooded

Component Description

La prairie and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 38 inches; loam
H3--38 to 50 inches; loam
H4--50 to 60 inches; stratified fine sandy loam to silty clay loam

60--Glyndon Silt Loam

Component Description

Glyndon and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 18 inches; silt loam
H3--18 to 60 inches; very fine sandy loam

67--Bearden Silty Clay Loam

Component Description

Bearden and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 11 inches; silty clay loam
H2--11 to 46 inches; silt loam
H3--46 to 60 inches; silt loam

70--Svea Loam

Component Description

Svea and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 26 inches; loam
H3--26 to 60 inches; loam

85--Calco Silty Clay Loam, Occasionally Flooded

Component Description

Calco and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 13.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 55 inches; silty clay loam
H3--55 to 60 inches; silty clay loam

108--Mcintosh Silt Loam

Component Description

Mcintosh and similar soils
Extent: 80 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.7 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 30 inches; silt loam
H3--30 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 50 inches; clay loam
H3--50 to 60 inches; loam

114--Glencoe Silty Clay Loam

Component Description

Glencoe and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 40 inches; silty clay loam
H3--40 to 55 inches; clay loam
H4--55 to 60 inches; loam

127A--Sverdrup Sandy Loam, 0 To 2 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 85 percent of the unit

Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 43 inches; loamy sand
H3--43 to 60 inches; sand

127B--Sverdrup Sandy Loam, 2 To 6 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 21 inches; sandy loam
H3--21 to 60 inches; sand

127C--Sverdrup Sandy Loam, 6 To 12 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 15 inches; sandy loam
H3--15 to 60 inches; sand

137--Dovray Silty Clay

Component Description

Dovray and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October

November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay
H2--10 to 25 inches; silty clay
H3--25 to 47 inches; silty clay
H4--47 to 60 inches; silty clay loam

141A--Egeland Sandy Loam, 0 To 2 Percent Slopes

Component Description

Egeland and similar soils
Extent: 80 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 50 inches; sandy loam
H3--50 to 60 inches; loamy sand

141B--Egeland Sandy Loam, 2 To 6 Percent Slopes

Component Description

Egeland and similar soils
Extent: 80 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 13 inches; sandy loam
H2--13 to 45 inches; sandy loam
H3--45 to 60 inches; loamy sand

141C--Egeland Loam, 6 To 12 Percent Slopes

Component Description

Egeland and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 25 inches; sandy loam
H3--25 to 60 inches; loamy sand

168B--Forman Clay Loam, 2 To 6 Percent Slopes

Component Description

Forman and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 25 inches; clay loam
H3--25 to 60 inches; clay loam

184--Hamerly Loam

Component Description

Hamerly and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.7 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 29 inches; loam
H3--29 to 60 inches; loam

210--Fulda Silty Clay

Component Description

Fulda and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; silty clay
H2--13 to 28 inches; silty clay
H3--28 to 60 inches; silty clay

212A--Sinai Silty Clay Loam, 1 To 3 Percent Slopes

Component Description

Sinai and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 17 inches; silty clay loam
H3--17 to 34 inches; silty clay
H4--34 to 60 inches; stratified silty clay to silt loam

212B--Sinai Silty Clay, 3 To 6 Percent Slopes

Component Description

Sinai and similar soils
Extent: 75 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; silty clay
H2--10 to 19 inches; silty clay
H3--19 to 45 inches; silty clay
H4--45 to 60 inches; stratified silty clay to silt loam

219--Rolfe Silt Loam

Component Description

Rolfe and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; silt loam
H2--22 to 34 inches; silty clay
H3--34 to 60 inches; clay loam

220D2--Langhei Loam, 12 To 18 Percent Slopes, Eroded

Component Description

Langhei and similar soils
Extent: 75 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 16 inches; loam
H3--16 to 60 inches; loam

236--Vallers Clay Loam

Component Description

Vallers and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; clay loam
H2--15 to 30 inches; clay loam
H3--30 to 60 inches; clay loam

246--Marysland Loam

Component Description

Marysland and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 25 inches; loam
H3--25 to 60 inches; stratified coarse sand to gravelly coarse sand to fine sand to fine sand

276--Oldham Silty Clay

Component Description

Oldham and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; silty clay
H2--17 to 55 inches; silty clay
H3--55 to 60 inches; clay loam

284B--Poinsett Silty Clay Loam, 1 To 4 Percent Slopes

Component Description

Poinsett and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 20 inches; silty clay loam
H3--20 to 26 inches; silt loam
H4--26 to 60 inches; clay loam

288F--Esmond Loam, 18 To 40 Percent Slopes

Component Description

Esmond and similar soils
Extent: 70 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Sisseton and similar soils
Extent: 15 percent of the unit

290B--Rothsay Silt Loam, 1 To 4 Percent Slopes

Component Description

Rothsay and similar soils
Extent: 70 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 25 inches; very fine sandy loam
H3--25 to 60 inches; very fine sandy loam

Hantho and similar soils
Extent: 15 percent of the unit

293B--Swenoda Loam, 2 To 6 Percent Slopes

Component Description

Swenoda and similar soils
Extent: 75 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 25 inches; sandy loam
H3--25 to 60 inches; loam

314--Spottswood Loam

Component Description

Spottswood and similar soils
Extent: 70 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
3.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 32 inches; loam
H3--32 to 60 inches; gravelly sand, sand

Fordville and similar soils
Extent: 15 percent of the unit

338--Waubay Silty Clay Loam

Component Description

Waubay and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent

Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 16 inches; silty clay loam
H3--16 to 34 inches; silty clay loam
H4--34 to 60 inches; silt loam

339--Fordville Loam

Component Description

Fordville and similar soils
Extent: 80 percent of the unit
Slope range: 0 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 16 inches; loam
H3--16 to 21 inches; loam
H4--21 to 60 inches; gravelly sand

341A--Arvilla Sandy Loam, 0 To 2 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 23 inches; sandy loam
H3--23 to 60 inches; gravelly coarse sand, coarse sand

341B--Arvilla Sandy Loam, 2 To 6 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 13 inches; sandy loam
H3--13 to 60 inches; gravelly coarse sand, coarse sand

341C--Arvilla Sandy Loam, 6 To 12 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 90 percent of the unit

Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 14 inches; sandy loam
H3--14 to 60 inches; gravelly coarse sand, coarse sand

344--Quam Silty Clay Loam

Component Description

Quam and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 54 inches; silty clay loam
H3--54 to 60 inches; silty clay loam

347--Malachy Loam

Component Description

Malachy and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
3.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 18 inches; loam
H2--18 to 30 inches; sandy loam
H3--30 to 60 inches; loamy fine sand

375--Forada Loam

Component Description

Forada and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat

Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 21 inches; loam
H2--21 to 35 inches; sandy loam
H3--35 to 60 inches; loamy sand

396D2--Sisseton Loam, 12 To 18 Percent Slopes, Eroded

Component Description

Sisseton and similar soils
Extent: 85 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 18 inches; loam
H3--18 to 60 inches; stratified silt loam to sandy loam

402F--Sioux Gravelly Loam, 12 To 40 Percent Slopes

Component Description

Sioux and similar soils
Extent: 85 percent of the unit
Slope range: 12 to 40 percent
Surface layer texture: Gravelly loam, loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; gravelly loam, loam
H2--7 to 10 inches; gravelly sandy loam, sandy loam
H3--10 to 60 inches; very gravelly sand, sand

418--Lamoure Silty Clay Loam, Occasionally Flooded

Component Description

Lamoure and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August

Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 55 inches; silty clay loam
H3--55 to 60 inches; loam

421B--Ves Loam, 1 To 4 Percent Slopes

Component Description

Ves and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 25 inches; loam
H3--25 to 60 inches; loam

423--Seaforth Loam

Component Description

Seaforth and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.7 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 21 inches; loam
H3--21 to 60 inches; loam

434--Perella Silty Clay Loam

Component Description

Perella and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches

Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 25 inches; silty clay loam
H3--25 to 60 inches; silt loam

437F--Buse Loam, 18 To 40 Percent Slopes

Component Description

Buse and similar soils
Extent: 70 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Langhei and similar soils
Extent: 15 percent of the unit

446--Normania Clay Loam

Component Description

Normania and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 23 inches; clay loam
H3--23 to 60 inches; loam

450--Rauville Silty Clay Loam, Frequently Flooded

Component Description

Rauville and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent

Typical profile:
H1--0 to 42 inches; silty clay loam
H2--42 to 60 inches; silty clay loam

494B--Darnen Loam, 2 To 6 Percent Slopes

Component Description

Darnen and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 26 inches; loam
H2--26 to 44 inches; loam
H3--44 to 60 inches; loam

497--Hantho Silt Loam

Component Description

Hantho and similar soils
Extent: 70 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 22 inches; silt loam
H3--22 to 60 inches; very fine sandy loam

509--Vallers Clay Loam, Very Stony

Component Description

Vallers and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; clay loam
H2--13 to 19 inches; clay loam
H3--19 to 60 inches; loam

574--Du Page Loam, Occasionally Flooded

Component Description

Du page and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 46 inches; loam
H2--46 to 60 inches; sandy loam

597--Tara Silt Loam

Component Description

Tara and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 25 inches; silt loam
H3--25 to 36 inches; silt loam
H4--36 to 60 inches; clay loam

610--Calco Silty Clay Loam, Frequently Flooded

Component Description

Calco and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.8 inches

Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 41 inches; silty clay loam
H2--41 to 46 inches; silty clay loam
H3--46 to 60 inches; silty clay loam

680--Parnell Silty Clay Loam

Component Description

Parnell and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; silty clay loam
H2--17 to 39 inches; silty clay
H3--39 to 60 inches; silty clay loam

694C2--Zell Silt Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Zell and similar soils
Extent: 80 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 11 inches; silt loam
H3--11 to 60 inches; silt loam

706--Bigstone Silty Clay Loam, Ponded

Component Description

Bigstone and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 11 inches; silty clay loam
H2--11 to 30 inches; silty clay loam

H3--30 to 60 inches; clay loam

Oldham and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Depression

724--Bigstone Silty Clay Loam

Component Description

Bigstone and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 54 inches; silty clay loam
H3--54 to 60 inches; clay loam

Oldham and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Depression

741B--Poinsett-Buse Complex, 2 To 6 Percent Slopes

Component Description

Poinsett and similar soils
Extent: 45 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 17 inches; silty clay loam
H3--17 to 60 inches; silt loam

Buse and similar soils
Extent: 30 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches;

748B--Hamlet Loam, 1 To 4 Percent Slopes

Component Description

Hamlet and similar soils
Extent: 70 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 38 inches; loam
H3--38 to 60 inches; loam

Svea and similar soils
Extent: 15 percent of the unit

769A--Mehurin Clay Loam, 0 To 2 Percent Slopes

Component Description

Mehurin and similar soils
Extent: 75 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 4.7 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 14 inches; clay loam
H3--14 to 21 inches; clay loam
H4--21 to 60 inches; clay loam

769B--Mehurin Clay Loam, 2 To 6 Percent Slopes

Component Description

Mehurin and similar soils
Extent: 75 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 17 inches; clay loam
H3--17 to 30 inches; clay loam
H4--30 to 60 inches; clay loam

774--Svea Loam, Very Stony

Component Description

Svea and similar soils
Extent: 75 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 23 inches; loam
H3--23 to 60 inches; loam

777C2--Sisseton-Heimdal Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Sisseton and similar soils
Extent: 60 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 24 inches; loam
H3--24 to 60 inches; stratified silt loam to sandy loam

Heimdal and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 26 inches; loam
H3--26 to 47 inches; loam
H4--47 to 60 inches; loam

883--Du Page-Zumbro Complex, Occasionally Flooded

Component Description

Du page and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained

Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 38 inches; loam
H2--38 to 60 inches; sandy loam

Zumbro and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.0 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 32 inches; loamy sand
H3--32 to 47 inches; loamy sand
H4--47 to 60 inches; sand

891B--Doland-Buse Complex, 3 To 6 Percent Slopes

Component Description

Doland and similar soils
Extent: 45 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 28 inches; silt loam
H3--28 to 60 inches; clay loam

Buse and similar soils
Extent: 25 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

902B--Barnes-Buse Complex, 2 To 6 Percent Slopes

Component Description

Barnes and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 21 inches; loam
H3--21 to 60 inches; loam

Buse and similar soils
Extent: 35 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

915C2--Buse-Forman Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Buse and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; clay loam

Forman and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 15 inches; clay loam
H3--15 to 60 inches; clay loam

942C2--Langhei-Barnes Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Langhei and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 5 inches; loam
H2--5 to 23 inches; loam
H3--23 to 60 inches; loam

Barnes and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 32 inches; loam
H3--32 to 60 inches; loam

954B--Ves-Swanlake Complex, 3 To 6 Percent Slopes

Component Description

Ves and similar soils
Extent: 45 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 21 inches; loam
H3--21 to 60 inches; loam

Swanlake and similar soils
Extent: 30 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

954C2--Storden-Ves Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 5 inches; loam
H2--5 to 60 inches; loam

Ves and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 22 inches; loam
H3--22 to 60 inches; loam

969B--Zell-Rothsay Complex, 3 To 6 Percent Slopes

Component Description

Zell and similar soils
Extent: 45 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 21 inches; silt loam
H3--21 to 60 inches; silt loam

Rothsay and similar soils
Extent: 25 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 23 inches; very fine sandy loam
H3--23 to 60 inches; silt loam

1013--Pits, Quarry

Component Description

Pits
Extent: 95 percent of the unit
Slope range: 0 to 20 percent
Depth to restrictive feature:
Bedrock (lithic): 0 to 4 inches
Flooding: None

1016--Udorthents, Loamy

Component Description

Udorthents, loamy
Extent: 85 percent of the unit
Slope range: 0 to 20 percent
Drainage class: Well drained
Flooding: None

1030--Udorthents-Pits, Gravel, Complex

Component Description

Udorthents
Extent: 50 percent of the unit

Pits
Extent: 35 percent of the unit

1051--Glencoe Silty Clay Loam, Ponded

Component Description

Glencoe and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 45 inches; silty clay loam
H2--45 to 57 inches; clay loam
H3--57 to 60 inches; loam

1106C--Storden-Hawick-Ves Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 5 inches; loam
H2--5 to 60 inches; loam

Hawick and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam, sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent

Typical profile:
H1--0 to 9 inches; gravelly sandy loam, sandy loam
H2--9 to 20 inches; gravelly loamy coarse sand, loamy coarse sand
H3--20 to 60 inches; gravelly coarse sand, coarse sand

Ves and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 23 inches; loam
H3--23 to 60 inches; loam

1107D--Sisseton-Sioux-Heimdal Complex, 6 To 18 Percent Slopes, Eroded

Component Description

Sisseton and similar soils
Extent: 31 percent of the unit
Slope range: 6 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
H1--0 to 5 inches; loam
H2--5 to 31 inches; loam
H3--31 to 60 inches; stratified silt loam to sandy loam

Sioux and similar soils
Extent: 29 percent of the unit
Slope range: 6 to 18 percent
Surface layer texture: Gravelly loam, loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; gravelly loam, loam
H2--7 to 29 inches; gravelly loamy sand, loamy sand
H3--29 to 60 inches; very gravelly sand, sand

Heimdal and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 21 inches; sandy loam
H3--21 to 60 inches; loam

1108--Harps-Glencoe-Seaforth Complex

Component Description

Harps and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 38 inches; loam
H3--38 to 60 inches; loam

Glencoe and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 30 inches; silty clay loam
H3--30 to 57 inches; clay loam
H4--57 to 60 inches; loam

Seaforth and similar soils
Extent: 20 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.7 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 30 inches; loam
H3--30 to 60 inches; loam

1222--Parle Clay Loam

Component Description

Parle and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Flat

Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 26 inches; clay loam
H3--26 to 34 inches; loam
H4--34 to 50 inches; silt loam
H5--50 to 60 inches; loamy fine sand

1233B--Esmond-Heimdal Complex, 2 To 6 Percent Slopes

Component Description

Esmond and similar soils
Extent: 50 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

Heimdal and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 25 inches; sandy loam
H3--25 to 60 inches; loam

1266C--Yellowbank-Rock Outcrop Complex, 1 To 25 Percent Slopes

Component Description

Yellowbank and similar soils
Extent: 60 percent of the unit
Slope range: 1 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 10 to 30 inches
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 16 inches; loam, sandy loam
H3--16 to 26 inches; unweathered bedrock

Rock outcrop
Extent: 25 percent of the unit
Slope range: 1 to 25 percent
Surface layer texture: Unweathered bedrock
Depth to restrictive feature:
Bedrock (lithic): 0 to 4 inches
Flooding: None
Typical profile:
H1--0 to 60 inches; unweathered bedrock

1295B--Doland Silt Loam, 2 To 4 Percent Slopes, Moderately Wet

Component Description

Doland and similar soils
Extent: 80 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 23 inches; silt loam
H3--23 to 42 inches; loam
H4--42 to 60 inches; clay loam

1296--Swenoda Sandy Loam, 0 To 2 Percent Slopes, Moderately Wet

Component Description

Swenoda and similar soils
Extent: 75 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 16 inches; sandy loam
H2--16 to 21 inches; sandy loam
H3--21 to 60 inches; loam

1309C--Buse-Doland Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Buse and similar soils
Extent: 45 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 8 inches; loam

H2--8 to 60 inches; loam

Doland and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 18 inches; silt loam
H3--18 to 60 inches; clay loam

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

1865C--Buse-Barnes Complex, 2 To 12 Percent Slopes, Extremely Stony

Component Description

Buse and similar soils
Extent: 55 percent of the unit
Slope range: 3 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

Barnes and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 22 inches; loam
H3--22 to 60 inches; loam

1865F--Buse Loam, 12 To 40 Percent Slopes, Extremely Stony

Component Description

Buse and similar soils
Extent: 70 percent of the unit
Slope range: 12 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Langhei and similar soils
Extent: 15 percent of the unit

1870--Burr-Calco Complex, Occasionally Flooded

Component Description

Burr and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 45 inches; silty clay loam
H3--45 to 60 inches; stratified silt loam to clay

Calco and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 30 inches; silty clay loam
H2--30 to 51 inches; silty clay loam
H3--51 to 60 inches; silty clay loam

1938--Lakepark Loam

Component Description

Lakepark and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Swale
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 26 inches; clay loam
H3--26 to 37 inches; loam
H4--37 to 60 inches; loam

Darnen and similar soils
Extent: 15 percent of the unit

1994--Embden Sandy Loam

Component Description

Embden and similar soils
Extent: 75 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
3.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 17 inches; sandy loam
H2--17 to 60 inches; sandy loam

W--Water

Component Description

Water
Extent: 100 percent of the unit

Lake County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Lake of the Woods County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Le Sueur County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Lincoln County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

6--Aastad Clay Loam, 0 To 2 Percent Slopes

Component Description

Aastad and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; clay loam
H2--12 to 19 inches; clay loam
H3--19 to 68 inches; clay loam

33B--Barnes Loam, 1 To 4 Percent Slopes

Component Description

Barnes and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 16 inches; loam
H3--16 to 60 inches; loam

33B2--Barnes Loam, 3 To 6 Percent Slopes, Eroded

Component Description

Barnes and similar soils
Extent: 90 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 12 inches; loam
H3--12 to 60 inches; loam

36--Flom Clay Loam

Component Description

Flom and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 39 inches; clay loam
H3--39 to 60 inches; clay loam

51--La Prairie Loam

Component Description

La prairie and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 40 inches; loam
H3--40 to 60 inches; stratified fine sandy loam to silty clay loam

70--Svea Loam, 1 To 3 Percent Slopes

Component Description

Svea and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 21 inches; loam

H2--21 to 31 inches; loam
H3--31 to 60 inches; loam

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; clay loam
H2--22 to 31 inches; clay loam
H3--31 to 60 inches; loam

114--Glencoe Silty Clay Loam

Component Description

Glencoe and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 42 inches; clay loam
H3--42 to 47 inches; loam
H4--47 to 60 inches; clay loam

127--Sverdrup Sandy Loam, 0 To 2 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; sandy loam

H2--9 to 32 inches; sandy loam
H3--32 to 60 inches; sand

127B--Sverdrup Sandy Loam, 2 To 6 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 32 inches; sandy loam
H3--32 to 60 inches; sand

149B--Everly Clay Loam, 2 To 4 Percent Slopes

Component Description

Everly and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 26 inches; clay loam
H3--26 to 60 inches; loam

149B2--Everly Clay Loam, 3 To 6 Percent Slopes, Eroded

Component Description

Everly and similar soils
Extent: 90 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 26 inches; clay loam
H3--26 to 60 inches; loam

149C2--Everly Clay Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Everly and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 26 inches; clay loam
H3--26 to 60 inches; loam

168B--Forman Clay Loam, 2 To 4 Percent Slopes

Component Description

Forman and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 19 inches; clay loam
H3--19 to 60 inches; clay loam

168B2--Forman Clay Loam, 3 To 6 Percent Slopes, Eroded

Component Description

Forman and similar soils
Extent: 90 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 19 inches; clay loam
H3--19 to 60 inches; clay loam

184--Hamerly Loam, 1 To 3 Percent Slopes

Component Description

Hamerly and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 26 inches; loam
H3--26 to 60 inches; loam

210--Fulda Silty Clay

Component Description

Fulda and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; silty clay
H2--17 to 28 inches; silty clay
H3--28 to 60 inches; silty clay

212--Sinai Silty Clay, 1 To 3 Percent Slopes

Component Description

Sinai and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 17 inches; silty clay
H2--17 to 33 inches; silty clay
H3--33 to 47 inches; silty clay
H4--47 to 60 inches; silty clay loam

219--Rolfe Loam

Component Description

Rolfe and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; loam

H2--20 to 32 inches; clay
H3--32 to 60 inches; loam

236--Vallers Clay Loam

Component Description

Vallers and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; clay loam
H2--15 to 25 inches; clay loam
H3--25 to 60 inches; loam

241--Letri Clay Loam

Component Description

Letri and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 35 inches; clay loam
H3--35 to 60 inches; loam

246--Marysland Loam

Component Description

Marysland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:

H1--0 to 18 inches; loam
H2--18 to 42 inches; loam
H3--42 to 60 inches; stratified gravelly coarse sand to fine sand

276--Oldham Silty Clay Loam

Component Description

Oldham and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; silty clay loam
H2--13 to 31 inches; silty clay loam
H3--31 to 60 inches; silty clay loam

284B--Poinsett Silty Clay Loam, 1 To 4 Percent Slopes

Component Description

Poinsett and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; silty clay loam
H2--11 to 30 inches; silty clay loam
H3--30 to 60 inches; silty clay loam

284B2--Poinsett Silty Clay Loam, 3 To 6 Percent Slopes, Eroded

Component Description

Poinsett and similar soils
Extent: 90 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 11 inches; silty clay loam
H2--11 to 30 inches; silty clay loam
H3--30 to 60 inches; silty clay loam

284C2--Poinsett Silty Clay Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Poinsett and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 11 inches; silty clay loam
H2--11 to 30 inches; silty clay loam
H3--30 to 60 inches; silty clay loam

335--Urness Silt Loam

Component Description

Urness and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 11.5 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 44 inches; mucky silty clay loam
H3--44 to 60 inches; silty clay loam

339--Fordville Loam, 0 To 2 Percent Slopes

Component Description

Fordville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 23 inches; loam
H3--23 to 28 inches; loam
H4--28 to 60 inches; gravelly sand

339B--Fordville Loam, 2 To 6 Percent Slopes

Component Description

Fordville and similar soils
Extent: 90 percent of the unit

Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 21 inches; loam
H3--21 to 26 inches; loam
H4--26 to 60 inches; gravelly sand

341--Arvilla Sandy Loam, 0 To 2 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 19 inches; sandy loam
H3--19 to 60 inches; gravelly coarse sand

341B--Arvilla Sandy Loam, 2 To 6 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 19 inches; sandy loam
H3--19 to 60 inches; gravelly coarse sand

341C--Arvilla Sandy Loam, 6 To 12 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 19 inches; sandy loam

H3--19 to 60 inches; gravelly coarse sand

344--Quam Silty Clay Loam

Component Description

Quam and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.9 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 43 inches; silty clay loam
H3--43 to 60 inches; silty clay loam

345--Wilmonton Clay Loam, 0 To 2 Percent Slopes

Component Description

Wilmonton and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 31 inches; clay loam
H3--31 to 60 inches; clay loam

347--Malachy Loam

Component Description

Malachy and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
3.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 36 inches; fine sandy loam

H3--36 to 60 inches; sand

402E--Sioux Soils, 2 To 40 Percent Slopes

Component Description

Sioux and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 40 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 11 inches; gravelly sandy loam
H2--11 to 16 inches; gravelly sandy loam
H3--16 to 60 inches; very gravelly sand

418--Lamoure Silty Clay Loam

Component Description

Lamoure and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 25 inches; silty clay loam
H2--25 to 38 inches; silty clay loam
H3--38 to 60 inches; silty clay loam

421B--Ves Loam, 1 To 4 Percent Slopes

Component Description

Ves and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 21 inches; loam
H3--21 to 36 inches; loam
H4--36 to 60 inches; loam

421B2--Ves Loam, 3 To 6 Percent Slops, Eroded

Component Description

Ves and similar soils
Extent: 90 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 21 inches; loam
H3--21 to 36 inches; loam
H4--36 to 60 inches; loam

423--Seaforth Loam, 1 To 3 Percent Slopes

Component Description

Seaforth and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 24 inches; loam
H3--24 to 60 inches; loam

437E--Buse Loam, 18 To 25 Percent Slopes

Component Description

Buse and similar soils
Extent: 90 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

437F--Buse Loam, 25 To 40 Percent Slopes

Component Description

Buse and similar soils
Extent: 90 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

446--Normania Loam, 1 To 3 Percent Slopes

Component Description

Normania and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 26 inches; loam
H3--26 to 50 inches; loam
H4--50 to 60 inches; loam

450--Rauville Silty Clay Loam

Component Description

Rauville and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 38 inches; silty clay loam
H2--38 to 60 inches; silty clay loam

494B--Darnen Loam, 2 To 6 Percent Slopes

Component Description

Darnen and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.9 feet April
Wet soil moisture status is lowest (depth, months):

More than 6.6 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 27 inches; loam
H2--27 to 42 inches; loam
H3--42 to 60 inches; loam

894D2--Storden-Everly Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Everly and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 15 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 19 inches; loam
H3--19 to 60 inches; loam

902C2--Barnes-Buse Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Barnes and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 12 inches; loam
H3--12 to 60 inches; loam

Buse and similar soils
Extent: 45 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

904B2--Arvilla-Barnes-Buse Complex, 2 To 6 Percent Slopes, Eroded

Component Description

Arvilla and similar soils
Extent: 40 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 16 inches; sandy loam
H3--16 to 60 inches; gravelly coarse sand

Barnes and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 12 inches; sandy clay loam
H3--12 to 60 inches; loam

Buse and similar soils
Extent: 20 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

904C2--Arvilla-Buse-Barnes Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Arvilla and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches

Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 14 inches; sandy loam
H3--14 to 60 inches; gravelly coarse sand

Buse and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

Barnes and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 12 inches; loam
H3--12 to 60 inches; loam

913D2--Buse-Barnes Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Buse and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

Barnes and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 12 inches; loam
H3--12 to 60 inches; loam

915C2--Forman-Buse Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Forman and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 14 inches; clay loam
H3--14 to 60 inches; clay loam

Buse and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

915D2--Buse-Forman Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Buse and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

Forman and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 14 inches; clay loam
H3--14 to 60 inches; clay loam

917D2--Buse-Sioux Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Buse and similar soils
Extent: 50 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 26 inches; loam
H3--26 to 60 inches; loam

Sioux and similar soils
Extent: 40 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; gravelly sandy loam
H2--7 to 12 inches; gravelly loamy sand
H3--12 to 60 inches; very gravelly sand

917E--Buse-Sioux Complex, 18 To 40 Percent Slopes

Component Description

Buse and similar soils
Extent: 45 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 26 inches; loam
H3--26 to 60 inches; loam

Sioux and similar soils
Extent: 45 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; gravelly sandy loam
H2--7 to 12 inches; gravelly loamy sand
H3--12 to 60 inches; very gravelly sand

953C--Arvilla-Storden-Ves Complex, 6 To 15 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 60 inches; gravelly coarse sand

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Ves and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 18 inches; loam
H3--18 to 36 inches; loam
H4--36 to 60 inches; loam

954C2--Storden-Ves Loams, 5 To 12 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 55 percent of the unit
Slope range: 5 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Ves and similar soils
Extent: 35 percent of the unit
Slope range: 5 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 18 inches; loam
H3--18 to 36 inches; loam
H4--36 to 60 inches; loam

954D2--Storden-Ves Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Ves and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 18 inches; loam
H3--18 to 36 inches; loam
H4--36 to 60 inches; loam

986--Lamoure And La Prairie Soils, Frequently Flooded

Component Description

La prairie and similar soils
Extent: 45 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 40 inches; loam
H3--40 to 60 inches; stratified fine sandy loam to silty clay loam

Lamoure and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 25 inches; silty clay loam
H2--25 to 38 inches; silty clay loam
H3--38 to 60 inches; silty clay loam

1016--Udorthents

Component Description

Udorthents
Extent: 100 percent of the unit

1029--Pits, Gravel

Component Description

Pits
Extent: 100 percent of the unit

1032--Aquents And Udorthents

Component Description

Aquents
Extent: 65 percent of the unit

Udorthents
Extent: 30 percent of the unit

1053--Aquolls And Aquents, Ponded

Component Description

Aquolls
Extent: 55 percent of the unit
Geomorphic description:
Depression
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May

Aquents
Extent: 35 percent of the unit
Geomorphic description:
Depression
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

1809--Bearden Complex

Component Description

Bearden and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches;
H2--14 to 37 inches; silty clay loam
H3--37 to 60 inches; loam

1810--Colvin Complex

Component Description

Colvin and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 30 inches; silty clay loam
H3--30 to 60 inches; silty clay loam

1814--Oldham Silty Clay

Component Description

Oldham and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None

Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; silty clay
H2--17 to 33 inches; silty clay
H3--33 to 60 inches; clay loam

W--Water

Component Description

Water
Extent: 100 percent of the unit

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

27B--Dickinson Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 17 inches; fine sandy loam
H2--17 to 34 inches; sandy loam
H3--34 to 60 inches; sand

35--Blue Earth Mucky Silty Clay Loam

Component Description

Blue earth and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Relict lakebed
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 8 inches; mucky silty clay loam
H2--8 to 60 inches; mucky silty clay loam

39A--Wadena Loam, 0 To 2 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 28 inches; loam
H3--28 to 60 inches; gravelly coarse sand

39B--Wadena Loam, 2 To 6 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 27 inches; loam
H3--27 to 60 inches; gravelly coarse sand

41A--Estherville Loam, 0 To 2 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 20 inches; sandy loam
H3--20 to 60 inches; gravelly coarse sand

41B--Estherville Loam, 2 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 18 inches; sandy loam
H3--18 to 60 inches; coarse sand

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September

Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 23 inches; clay loam
H3--23 to 60 inches; clay loam

94B--Terril Loam, 2 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 30 inches; loam
H2--30 to 60 inches; loam

102B--Clarion Loam, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 27 inches; clay loam
H3--27 to 60 inches; loam

106B--Lester Loam, 2 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 30 inches; clay loam
H3--30 to 60 inches; loam

109--Cordova Clay Loam

Component Description

Cordova and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 30 inches; clay loam
H3--30 to 60 inches; clay loam

112--Harps Clay Loam

Component Description

Harps and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 32 inches; clay loam
H3--32 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 25 inches; clay loam
H3--25 to 60 inches; clay loam

114--Glencoe Clay Loam

Component Description

Glencoe and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 34 inches; clay loam
H3--34 to 60 inches; clay loam

118--Crippin Loam

Component Description

Crippin and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 30 inches; clay loam
H3--30 to 60 inches; loam

130--Nicollet Clay Loam

Component Description

Nicollet and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 26 inches; clay loam
H3--26 to 60 inches; clay loam

134--Okoboji Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 45 inches; silty clay loam
H3--45 to 60 inches; silty clay loam

238B--Kilkenny Clay Loam, 2 To 6 Percent Slopes

Component Description

Kilkenny and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 24 inches; clay loam
H3--24 to 60 inches; clay loam

239--Le Sueur Loam

Component Description

Le sueur and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet January February March April May
November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet June July August September
October
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; loam

H2--12 to 30 inches; clay loam
H3--30 to 60 inches; loam

247--Linder Loam

Component Description

Linder and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 5.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 25 inches; sandy loam
H3--25 to 60 inches; gravelly sand

255--Mayer Loam

Component Description

Mayer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; loam
H2--22 to 30 inches; loam
H3--30 to 60 inches; gravelly coarse sand

269--Millington Clay Loam, Occasionally Flooded

Component Description

Millington and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Occasional April May June
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February August

September October November
December
Ponding: At 0.2 foot all year
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 36 inches; loam
H3--36 to 60 inches; loam

313--Spillville Loam, Occasionally Flooded

Component Description

Spillville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Occasional February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
4.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 40 inches; loam
H2--40 to 60 inches; loam

327B--Dickman Sandy Loam, 1 To 6 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 19 inches; sandy loam
H3--19 to 60 inches; sand

336--Delft Clay Loam

Component Description

Delft and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):

More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 12.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 42 inches; clay loam
H3--42 to 60 inches; loam

362--Millington Loam, Frequently Flooded

Component Description

Millington and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
At the surface March April May June July
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February August
September October November
December
Ponding: At 0.2 foot all year
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 38 inches; loam
H3--38 to 60 inches; loam

386--Okoboji Mucky Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
H1--0 to 10 inches; mucky silty clay loam
H2--10 to 34 inches; silty clay loam
H3--34 to 60 inches; silty clay loam

392--Biscay Clay Loam

Component Description

Biscay and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent

Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; clay loam
H2--22 to 34 inches; clay loam
H3--34 to 60 inches; gravelly coarse sand

414--Hamel Loam

Component Description

Hamel and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 30 inches; loam
H2--30 to 42 inches; clay loam
H3--42 to 60 inches; loam

517--Shandep Clay Loam

Component Description

Shandep and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 28 inches; clay loam
H2--28 to 41 inches; clay loam
H3--41 to 60 inches; loamy sand

525--Muskego Muck

Component Description

Muskego and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent

Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July August November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet September October
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 9 inches; muck
H2--9 to 36 inches;
H3--36 to 60 inches; coprogenous earth

539--Klossner Muck

Component Description

Klossner and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 16.7 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 24 inches; muck
H2--24 to 42 inches; silty clay loam
H3--42 to 60 inches; silty clay loam

611C--Hawick Coarse Sandy Loam, 4 To 12 Percent Slopes

Component Description

Hawick and similar soils
Extent: 90 percent of the unit
Slope range: 4 to 12 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 9 inches; coarse sandy loam
H2--9 to 16 inches; gravelly coarse sand
H3--16 to 60 inches; gravelly coarse sand

887B--Clarion-Swanlake Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 27 inches; loam
H3--27 to 60 inches; loam

Swanlake and similar soils
Extent: 25 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

920B--Clarion-Estherville Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 32 inches; loam
H3--32 to 60 inches; loam

Estherville and similar soils
Extent: 20 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 16 inches; coarse sandy loam
H3--16 to 60 inches; gravelly coarse sand

920C2--Clarion-Storden-Estherville Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 24 inches; loam
H3--24 to 60 inches; loam

Storden and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Estherville and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 16 inches; coarse sandy loam
H3--16 to 60 inches; gravelly coarse sand

920D2--Clarion-Storden-Estherville Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 45 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 20 inches; loam
H3--20 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Estherville and similar soils
Extent: 15 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 7 inches; sandy loam, loam
H2--7 to 12 inches; sandy loam
H3--12 to 60 inches; gravelly coarse sand

921C2--Clarion-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 24 inches; loam
H3--24 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

944B--Lester-Storden-Estherville Complex, 2 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 28 inches; clay loam
H3--28 to 60 inches; loam

Storden and similar soils

Extent: 25 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Estherville and similar soils
Extent: 15 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly coarse sand

945B--Lester-Storden Complex, 2 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 30 inches; clay loam
H3--30 to 60 inches; loam

Storden and similar soils
Extent: 25 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

945C2--Lester-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent

Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 26 inches; clay loam
H3--26 to 60 inches; clay loam

Storden and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

956--Canisteo-Glencoe Complex

Component Description

Canisteo and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 22 inches; clay loam
H3--22 to 60 inches; clay loam

Glencoe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 30 inches; clay loam
H3--30 to 60 inches; clay loam

960D2--Storden-Clarion Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 45 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Clarion and similar soils
Extent: 40 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 22 inches; loam
H3--22 to 60 inches; loam

960F--Storden-Clarion Complex, 18 To 40 Percent Slopes

Component Description

Storden and similar soils
Extent: 45 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 60 inches; loam

Clarion and similar soils
Extent: 40 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 22 inches; loam
H3--22 to 60 inches; loam

978--Cordova-Rolfe Complex

Component Description

Cordova and similar soils
Extent: 70 percent of the unit

Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 30 inches; clay loam
H3--30 to 60 inches; loam

Rolfe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H2--0 to 14 inches; loam
H1--14 to 26 inches; loam
H3--26 to 43 inches; silty clay
H4--43 to 60 inches; loam

1016--Udorthents, Loamy

Component Description

Udorthents and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 60 inches; loam

1030--Udorthents-Pits, Gravel Complex

Component Description

Udorthents and similar soils
Extent: 50 percent of the unit
Slope range: 0 to 50 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Typical profile:
H1--0 to 60 inches;

Pits and similar soils
Extent: 40 percent of the unit
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

1075--Klossner-Muskego Complex, Ponded

Component Description

Klossner and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 18.7 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 36 inches; muck
H2--36 to 60 inches; clay loam

Muskego and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture:
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 2.0 feet all year
Available water capacity to a depth of 60 inches: 20.2 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 40 inches;
H2--40 to 60 inches; coprogenous earth

1080--Klossner-Okoboji-Glencoe Complex, Ponded

Component Description

Klossner and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 15.2 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 20 inches; muck
H2--20 to 60 inches; clay loam

Okoboji and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 8 inches; silty clay loam
H2--8 to 30 inches; silty clay loam
H3--30 to 60 inches; silty clay loam

Glencoe and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 26 inches; clay loam
H2--26 to 30 inches; clay loam
H3--30 to 60 inches; loam

1084--Hanlon-Kalmarville Complex, Frequently Flooded

Component Description

Hanlon and similar soils
Extent: 50 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 16 inches; fine sandy loam
H2--16 to 40 inches; fine sandy loam
H3--40 to 60 inches; fine sandy loam

Kalmarville and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot January February March April May
June July August November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 32 inches; sandy loam

H2--32 to 60 inches; silt loam

1091--Klossner, Sandy Substratum-Harps-Mayer Complex

Component Description

Klossner, sandy substratum and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet June July August September
October
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 35.0 percent
Typical profile:
H1--0 to 18 inches; muck
H2--18 to 30 inches; sandy clay loam
H3--30 to 60 inches; gravelly loamy coarse sand

Harps and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 20 inches; clay loam
H3--20 to 60 inches; loam

Mayer and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 33 inches; clay loam
H3--33 to 60 inches; gravelly coarse sand

1092--Harps-Glencoe Complex

Component Description

Harps and similar soils
Extent: 50 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 36 inches; loam
H3--36 to 60 inches; loam

Glencoe and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 26 inches; clay loam
H2--26 to 36 inches; clay loam
H3--36 to 50 inches; clay loam
H4--50 to 60 inches; clay loam

1095--Zook Silty Clay Loam, Frequently Flooded

Component Description

Zook and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Frequent February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
0.5 foot January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 30 inches; silty clay loam
H2--30 to 50 inches; silty clay
H3--50 to 60 inches; silty clay loam

1159B--Strout-Arkton Complex, 2 To 6 Percent Slopes

Component Description

Strout and similar soils
Extent: 75 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; clay
H2--10 to 24 inches; clay
H3--24 to 60 inches; clay loam

Arkton and similar soils
Extent: 15 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 60 inches; clay loam

1193--Cosmos Silty Clay

Component Description

Cosmos and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; silty clay
H2--20 to 36 inches; silty clay
H3--36 to 60 inches; clay loam

1204B--Cokato Loam, 2 To 6 Percent Slopes

Component Description

Cokato and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 28 inches; clay loam
H3--28 to 60 inches; loam

1207B--Cokato-Le Sueur Complex, 1 To 6 Percent Slopes

Component Description

Cokato and similar soils
Extent: 45 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 31 inches; clay loam
H3--31 to 60 inches; loam

Le sueur and similar soils
Extent: 40 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet January February March April May
November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet June July August September
October
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 32 inches; clay loam
H3--32 to 60 inches; loam

1213B--Cokato-Storden Complex, 2 To 6 Percent Slopes

Component Description

Cokato and similar soils
Extent: 55 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 30 inches; clay loam
H3--30 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

1213C--Cokato-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Cokato and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 25 inches; clay loam
H3--25 to 60 inches; loam

Storden and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

1228--Hoopeston-Le Sueur Complex

Component Description

Hoopeston and similar soils
Extent: 60 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 34 inches; sandy loam
H3--34 to 60 inches; sand

Le sueur and similar soils
Extent: 30 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet January February March April May
November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet June July August September
October
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 32 inches; clay loam
H3--32 to 60 inches; loam

1229B--Cokato-Storden-Estherville Complex, 2 To 6 Percent Slopes

Component Description

Cokato and similar soils
Extent: 45 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 36 inches; clay loam
H3--36 to 60 inches; loam

Storden and similar soils
Extent: 25 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Estherville and similar soils
Extent: 20 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 20 inches; sandy loam
H3--20 to 60 inches; coarse sand

1833--Coland Clay Loam, Occasionally Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Occasional February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
2.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 48 inches; clay loam
H3--48 to 60 inches; loam

1834--Coland Clay Loam, Frequently Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Frequent February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
2.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 50 inches; clay loam

H3--50 to 60 inches; loam

1901B--Lester-Le Sueur Complex, 1 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 45 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 30 inches; clay loam
H3--30 to 60 inches; loam

Le sueur and similar soils
Extent: 40 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet January February March April May
November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet June July August September
October
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 35 inches; clay loam
H3--35 to 60 inches; loam

CW--Census Water

Component Description

Census water
Extent: 95 percent of the unit

Mahnomen County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Marshall County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

8B--Sparta Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Sparta and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 14 inches; loamy fine sand
H2--14 to 30 inches; loamy fine sand
H3--30 to 60 inches; fine sand

27B--Dickinson Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 5 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 19 inches; fine sandy loam
H2--19 to 34 inches; sandy loam
H3--34 to 60 inches; fine sand

35--Blue Earth Mucky Silty Clay Loam

Component Description

Blue earth and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Relict lakebed
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent

Typical profile:
H1--0 to 10 inches; mucky silty clay loam
H2--10 to 60 inches; mucky silty clay loam

37B--Farrar Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Farrar and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 20 inches; fine sandy loam
H2--20 to 60 inches; loam

39B--Wadena Loam, 1 To 6 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 38 inches; loam
H3--38 to 60 inches; sand

41B--Estherville Sandy Loam, 1 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; sandy loam
H2--13 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly coarse sand

41C--Estherville Sandy Loam, 6 To 12 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit

Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; sandy loam
H2--13 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly coarse sand

84--Brownton Silty Clay

Component Description

Brownton and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; silty clay
H2--20 to 60 inches; clay

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 23 inches; clay loam
H3--23 to 36 inches; clay loam
H4--36 to 60 inches; loam

94B--Terril Loam, 2 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 36 inches; clay loam
H3--36 to 60 inches; loam

96--Collinwood Silty Clay

Component Description

Collinwood and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 15 inches; silty clay
H2--15 to 35 inches; clay
H3--35 to 60 inches; silty clay

101B--Truman Silt Loam, 1 To 6 Percent Slopes

Component Description

Truman and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 33 inches; silt loam
H3--33 to 60 inches; silt loam

102B--Clarion Loam, 1 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December

Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 33 inches; loam
H3--33 to 60 inches; loam

106B--Lester Loam, 2 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 41 inches; clay loam
H3--41 to 60 inches; loam

106C--Lester Loam, 6 To 12 Percent Slopes

Component Description

Lester and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 41 inches; clay loam
H3--41 to 60 inches; loam

112--Harps Clay Loam

Component Description

Harps and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 14 inches; clay loam

H2--14 to 33 inches; clay loam
H3--33 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 19 inches; clay loam
H2--19 to 34 inches; clay loam
H3--34 to 60 inches; loam

114--Glencoe Clay Loam

Component Description

Glencoe and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 41 inches; clay loam
H2--41 to 53 inches; silty clay loam
H3--53 to 60 inches; silty clay loam

118--Crippin Loam

Component Description

Crippin and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:
H1--0 to 15 inches; loam
H2--15 to 27 inches; loam
H3--27 to 60 inches; loam

128B--Grogan Silt Loam, 1 To 6 Percent Slopes

Component Description

Grogan and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 18 inches; silt loam
H2--18 to 38 inches; silt loam
H3--38 to 60 inches; stratified very fine sandy loam to silt loam

130--Nicollet Clay Loam

Component Description

Nicollet and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 36 inches; clay loam
H3--36 to 60 inches; loam

134--Okoboji Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.2 inches

Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 28 inches; silty clay loam
H2--28 to 42 inches; silty clay loam
H3--42 to 60 inches; clay loam

136--Madelia Silty Clay Loam

Component Description

Madelia and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 37 inches; silty clay loam
H3--37 to 60 inches; silt loam

140--Spicer Silty Clay Loam

Component Description

Spicer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 24 inches; silty clay loam
H2--24 to 34 inches; silty clay loam
H3--34 to 60 inches; silty clay loam

181--Litchfield Sandy Loam

Component Description

Litchfield and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent

Typical profile:
H1--0 to 16 inches; sandy loam
H2--16 to 37 inches; stratified loamy sand to fine sandy loam
H3--37 to 60 inches; sand

197--Kingston Silt Loam

Component Description

Kingston and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 29 inches; silty clay loam
H3--29 to 60 inches; silt loam

227--Lemond Sandy Loam

Component Description

Lemond and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; sandy loam
H2--20 to 30 inches; sandy loam
H3--30 to 60 inches; sand

229--Waldorf Silty Clay Loam

Component Description

Waldorf and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:

H1--0 to 24 inches; silty clay loam
H2--24 to 36 inches; silty clay
H3--36 to 60 inches; silty clay loam

247--Linder Loam

Component Description

Linder and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.3 feet April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 29 inches; sandy loam
H3--29 to 60 inches; coarse sand

255--Mayer Loam

Component Description

Mayer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 30 inches; loam
H3--30 to 60 inches; sand

269--Millington Clay Loam, Occasionally Flooded

Component Description

Millington and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 28 inches; clay loam
H2--28 to 39 inches; clay loam
H3--39 to 60 inches; stratified loam to clay loam

275B--Ocheyedan Loam, 1 To 5 Percent Slopes

Component Description

Ocheyedan and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 22 inches; loam
H3--22 to 60 inches; silt loam

282--Hanska Loam

Component Description

Hanska and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 21 inches; loam
H2--21 to 34 inches; sandy loam
H3--34 to 60 inches; sand

313--Spillville Loam, Occasionally Flooded

Component Description

Spillville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None

Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 32 inches; loam
H2--32 to 60 inches; loam

336--Delft Loam

Component Description

Delft and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 36 inches; loam
H2--36 to 44 inches; loam
H3--44 to 54 inches; loam
H4--54 to 60 inches; loam

350--Canisteo Clay Loam, Depressional

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 27 inches; clay loam
H3--27 to 60 inches; loam

392--Biscay Sandy Clay Loam

Component Description

Biscay and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Sandy clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 22 inches; sandy clay loam
H2--22 to 32 inches; sandy clay loam
H3--32 to 60 inches; stratified sand to loamy sand

499--Hanska Loam, Depressional

Component Description

Hanska and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 24 inches; loam
H2--24 to 37 inches; sandy loam
H3--37 to 60 inches; sand

539--Palms Muck

Component Description

Palms and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 14.9 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 11 inches; muck
H2--11 to 33 inches; muck
H3--33 to 47 inches; silty clay loam
H4--47 to 60 inches; clay loam

548--Palms Muck, Sandy Substratum

Component Description

Palms and similar soils
Extent: 100 percent of the unit
Geomorphic description:

Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 35.0 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 21 inches; muck
H3--21 to 34 inches; silty clay loam
H4--34 to 60 inches; stratified loamy sand to sand

664--Zook Silty Clay Loam, Occasionally Flooded

Component Description

Zook and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 24 inches; silty clay loam
H2--24 to 38 inches; silty clay
H3--38 to 60 inches; silty clay loam

818--Lemond-Linder Complex

Component Description

Lemond and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 24 inches; sandy loam
H2--24 to 30 inches; sandy loam
H3--30 to 60 inches; loamy sand

Linder and similar soils
Extent: 25 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.3 feet April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 20 inches; sandy loam
H2--20 to 30 inches; sandy loam
H3--30 to 60 inches; loamy coarse sand

886--Nicollet-Crippin Complex

Component Description

Nicollet and similar soils
Extent: 50 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 36 inches; clay loam
H3--36 to 60 inches; loam

Crippin and similar soils
Extent: 35 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 27 inches; clay loam
H3--27 to 60 inches; loam

887B--Clarion-Swanlake Loams, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April

Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 33 inches; loam
H3--33 to 60 inches; loam

Swanlake and similar soils
Extent: 25 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 21 inches; loam
H2--21 to 28 inches; loam
H3--28 to 60 inches; loam

909C--Truman-Bold Silt Loams, 6 To 12 Percent Slopes

Component Description

Truman and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silt loam
H2--18 to 30 inches; silt loam
H3--30 to 60 inches; silt loam

Bold and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.3 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 60 inches; silt loam

909D2--Bold-Truman Silt Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Bold and similar soils
Extent: 40 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Silt loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 60 inches; silt loam

Truman and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 40 inches; silt loam
H3--40 to 60 inches; silt loam

920B--Clarion-Estherville Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 33 inches; loam
H3--33 to 60 inches; loam

Estherville and similar soils
Extent: 25 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; sandy loam
H2--13 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly loamy sand

920C2--Clarion-Estherville-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 10 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 36 inches; loam
H3--36 to 60 inches; loam

Estherville and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 30 inches; sandy loam
H3--30 to 60 inches; coarse sand

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

920D2--Clarion-Estherville-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 25 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 18 inches; loam
H3--18 to 60 inches; loam

Estherville and similar soils
Extent: 20 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.8 percent

Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 16 inches; sandy loam
H3--16 to 60 inches; gravelly coarse sand

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

921B--Clarion-Storden Loams, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 45 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 19 inches; loam
H3--19 to 60 inches; loam

Storden and similar soils
Extent: 35 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H3--9 to 60 inches; loam

921C2--Clarion-Storden Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 23 inches; loam
H3--23 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 60 inches; loam

956--Canisteo-Glencoe Clay Loams

Component Description

Canisteo and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 22 inches; clay loam
H3--22 to 28 inches; clay loam
H4--28 to 60 inches; loam

Glencoe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 26 inches; clay loam
H2--26 to 38 inches; clay loam
H3--38 to 60 inches; loam

960D2--Storden-Clarion Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 40 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 8 inches; loam
H3--8 to 60 inches; loam

Clarion and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 22 inches; loam
H3--22 to 60 inches; loam

960E--Storden-Clarion Loams, 18 To 25 Percent Slopes

Component Description

Storden and similar soils
Extent: 45 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

Clarion and similar soils
Extent: 30 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 30 inches; loam
H3--30 to 60 inches; loam

1029--Pits, Gravel

Component Description

Pits

Extent: 90 percent of the unit

1052--Palms And Okoboji Soils, Ponded

Component Description

Okoboji and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 35 inches; silty clay loam
H2--35 to 46 inches; silty clay loam
H3--46 to 60 inches; clay loam

Palms and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April August September
October November December
Wet soil moisture status is lowest (depth, months):
2.0 feet February
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.5 feet August September October
November December
Available water capacity to a depth of 60 inches: 16.5 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 26 inches; muck
H2--26 to 60 inches; clay loam

1090--Blue Earth Silt Loam

Component Description

Blue earth and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet January February March April May
June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 9.2 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 60 inches; silt loam

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

1833--Coland Loam, Occasionally Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; clay loam

1834--Coland Loam, Frequently Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 44 inches; clay loam
H3--44 to 60 inches; clay loam

1852F--Terril-Swanlake Loams, 18 To 40 Percent Slopes

Component Description

Terril and similar soils
Extent: 45 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None

Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 40 inches; loam
H3--40 to 60 inches; loam

Swanlake and similar soils
Extent: 25 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 30 inches; loam
H3--30 to 60 inches; loam

1877--Fostoria Clay Loam

Component Description

Fostoria and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 19 inches; clay loam
H2--19 to 25 inches; clay loam
H3--25 to 60 inches; silt loam

1907--Lakefield Silt Loam

Component Description

Lakefield and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; silt loam
H2--20 to 60 inches; silt loam

W--Water

Component Description
Water
Extent: 95 percent of the unit

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

8B--Sparta Loamy Sand, 1 To 6 Percent Slopes

Component Description

Sparta and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 16 inches; loamy sand
H2--16 to 29 inches; loamy sand
H3--29 to 60 inches; sand

8C--Sparta Loamy Sand, 6 To 12 Percent Slopes

Component Description

Sparta and similar soils
Extent: 90 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loamy sand
H2--7 to 13 inches; loamy fine sand
H3--13 to 60 inches; sand

8D--Sparta Loamy Sand, 12 To 25 Percent Slopes

Component Description

Sparta and similar soils
Extent: 90 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loamy sand
H2--9 to 40 inches; loamy fine sand
H3--40 to 60 inches; sand

35--Blue Earth Mucky Silt Loam, 0 To 1 Percent Slopes

Component Description

Blue earth and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Lakebed
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 8 inches; mucky silt loam
H2--8 to 60 inches; mucky silt loam

39A--Wadena Loam, 0 To 2 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 29 inches; loam
H3--29 to 60 inches; stratified sand to gravelly coarse sand

41A--Estherville Sandy Loam, 0 To 2 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 15 inches; sandy loam
H3--15 to 60 inches; gravelly coarse sand

85--Calco Silty Clay Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Calco and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December

Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 60 inches; silty clay loam

86--Canisteo Clay Loam, Moderately Fine Substratum, 0 To 2 Percent Slopes

Component Description

Canisteo and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 26 inches; clay loam
H3--26 to 33 inches; clay loam
H4--33 to 60 inches; loam

96B--Collinwood Silty Clay Loam, 3 To 6 Percent Slopes

Component Description

Collinwood and similar soils
Extent: 85 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 8 inches; silty clay loam
H2--8 to 32 inches; silty clay
H3--32 to 60 inches; silty clay loam

101B--Truman Silt Loam, 2 To 6 Percent Slopes

Component Description

Truman and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):

3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; silt loam
H2--14 to 40 inches; silt loam
H3--40 to 60 inches; silt loam

102B--Clarion Loam, Moderately Fine Substratum, 2 To 5 Percent Slopes

Component Description

Clarion and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 27 inches; loam
H3--27 to 60 inches; loam

106C2--Lester Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 27 inches; clay loam
H3--27 to 60 inches; loam

112--Harps Clay Loam, 0 To 2 Percent Slopes

Component Description

Harps and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None

Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 19 inches; clay loam
H2--19 to 25 inches; clay loam
H3--25 to 60 inches; loam

113--Webster Clay Loam, 0 To 2 Percent Slopes

Component Description

Webster and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 24 inches; clay loam
H3--24 to 60 inches; loam

114--Glencoe Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Glencoe and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 34 inches; clay loam
H3--34 to 80 inches; clay loam

129--Cylinder Loam, 0 To 1 Percent Slopes

Component Description

Cylinder and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):

4.9 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 31 inches; loam
H3--31 to 60 inches; gravelly sand

130--Nicollet Clay Loam, 1 To 3 Percent Slopes

Component Description

Nicollet and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 30 inches; clay loam
H3--30 to 60 inches; loam

134--Okoboji Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Okoboji and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 8 inches; silty clay loam
H2--8 to 28 inches; silty clay loam
H3--28 to 60 inches; silty clay loam

136--Madelia Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Madelia and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 30 inches; silt loam
H3--30 to 60 inches; silt loam

140--Spicer Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Spicer and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; silty clay loam
H2--14 to 27 inches; silty clay loam
H3--27 to 60 inches; silt loam

143B--Chelsea Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Chelsea and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
H1--0 to 6 inches; loamy fine sand
H2--6 to 60 inches; stratified loamy fine sand to fine sandy loam

178--Granby Fine Sandy Loam, 0 To 1 Percent Slopes

Component Description

Granby and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None

Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; fine sandy loam
H2--13 to 26 inches; fine sand
H3--26 to 60 inches; fine sand

181--Litchfield Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Litchfield and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 20 inches; loamy fine sand
H2--20 to 40 inches; stratified fine sand to very fine sandy loam
H3--40 to 60 inches; loamy fine sand

183--Dassel Mucky Fine Sandy Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Dassel and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
1.8 feet August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 11.5 percent
Typical profile:
H1--0 to 23 inches; mucky fine sandy loam
H2--23 to 31 inches; stratified loamy very fine sand to very fine
sandy loam
H3--31 to 60 inches; fine sand

197--Kingston Silty Clay Loam, 1 To 3 Percent Slopes

Component Description

Kingston and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):

More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 25 inches; silty clay loam
H3--25 to 60 inches; silt loam

211--Lura Silty Clay, Depressional, 0 To 1 Percent Slopes

Component Description

Lura and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 24 inches; silty clay
H2--24 to 31 inches; silty clay
H3--31 to 60 inches; silty clay

229--Waldorf Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Waldorf and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:
H1--0 to 8 inches; silty clay loam
H2--8 to 35 inches; silty clay
H3--35 to 60 inches; silty clay loam

239--Le Sueur Clay Loam, 1 To 3 Percent Slopes

Component Description

Le sueur and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):

1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 33 inches; clay loam
H3--33 to 60 inches; loam

281--Darfur Loam, 0 To 2 Percent Slopes

Component Description

Darfur and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 23 inches; loam
H2--23 to 30 inches; very fine sandy loam
H3--30 to 60 inches; stratified very fine sand to loamy very fine sand

286B--Shorewood Silty Clay Loam, 3 To 6 Percent Slopes

Component Description

Shorewood and similar soils
Extent: 85 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 38 inches; silty clay
H3--38 to 60 inches; silty clay loam

311C2--Shorewood Silty Clay, 6 To 12 Percent Slopes, Eroded

Component Description

Shorewood and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):

More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 4.6 percent
Typical profile:
H1--0 to 6 inches; silty clay
H2--6 to 20 inches; silty clay
H3--20 to 60 inches; silty clay loam

327A--Dickman Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 18 inches; sandy loam
H3--18 to 60 inches; sand

327B--Dickman Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dickman and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 30 inches; sandy loam
H3--30 to 60 inches; sand

399--Biscay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Biscay and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
1.8 feet August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 6.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:

H1--0 to 14 inches; loam
H2--14 to 25 inches; loam
H3--25 to 60 inches; stratified loamy sand to gravelly coarse
sand

415--Kanaranzi Loam, 0 To 3 Percent Slopes

Component Description

Kanaranzi and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 18 inches; loam
H3--18 to 60 inches; gravelly coarse sand

423--Seaforth Loam, 1 To 3 Percent Slopes

Component Description

Seaforth and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 28 inches; loam
H3--28 to 60 inches; loam

461B--Koronis Loam, 2 To 6 Percent Slopes

Component Description

Koronis and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 31 inches; fine sandy loam
H3--31 to 60 inches; fine sandy loam

461C2--Koronis Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Koronis and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 24 inches; fine sandy loam
H3--24 to 60 inches; fine sandy loam

511--Marcellon Loam, 0 To 3 Percent Slopes

Component Description

Marcellon and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 32 inches; loam
H3--32 to 60 inches; sandy loam

523--Houghton Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Houghton and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
H1--0 to 7 inches; muck
H2--7 to 60 inches; muck

525--Muskego Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Muskego and similar soils

Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 20.2 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 40 inches; muck
H3--40 to 60 inches; mucky silt loam

539--Klossner Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Klossner and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 18.3 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 28 inches; muck
H2--28 to 45 inches; silt loam
H3--45 to 60 inches; loam

548--Medo Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Medo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 15.3 inches
Content of organic matter in the upper 10 inches: 35.0 percent
Typical profile:

H1--0 to 24 inches; muck
H2--24 to 29 inches; silt loam
H3--29 to 56 inches; sandy loam
H4--56 to 60 inches; sand

610--Calco Silty Clay Loam, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Calco and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 13.0 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 6 inches; silty clay loam
H2--6 to 55 inches; silty clay loam
H3--55 to 60 inches; silty clay loam

611D--Hawick Gravelly Sandy Loam, 12 To 25 Percent Slopes

Component Description

Hawick and similar soils
Extent: 85 percent of the unit
Slope range: 12 to 25 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; gravelly sandy loam
H2--7 to 10 inches; gravelly loamy coarse sand
H3--10 to 60 inches; gravelly coarse sand

612B--Wadenill Loam, 2 To 6 Percent Slopes

Component Description

Wadenill and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 13 inches; loam

H2--13 to 30 inches; loam
H3--30 to 60 inches; sandy loam

613--Grovecity Loam, 1 To 3 Percent Slopes

Component Description

Grovecity and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 30 inches; sandy loam
H3--30 to 60 inches; fine sandy loam

664--Zook Silty Clay Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Zook and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 41 inches; silty clay
H3--41 to 60 inches; silty clay loam

740--Hamel-Glencoe, Depressional Complex, 0 To 3 Percent Slopes

Component Description

Hamel and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Drainageway
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent

Typical profile:
H1--0 to 28 inches; loam
H2--28 to 56 inches; clay loam
H3--56 to 60 inches; loam

Glencoe and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 45 inches; silty clay loam
H3--45 to 60 inches; clay loam

804B--Koronis-Sunburg-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Koronis and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 33 inches; loam
H3--33 to 60 inches; sandy loam

Sunburg and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 60 inches; sandy loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Gravelly loamy coarse sand

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; gravelly loamy coarse sand
H2--9 to 49 inches; gravelly coarse sand
H3--49 to 60 inches; gravelly coarse sand

804C2--Koronis-Sunburg-Hawick Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Koronis and similar soils
Extent: 45 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 26 inches; sandy loam
H3--26 to 60 inches; sandy loam

Sunburg and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 60 inches; sandy loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; gravelly coarse sand
H2--9 to 60 inches; gravelly loamy coarse sand

804D2--Koronis-Sunburg-Hawick Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Koronis and similar soils
Extent: 40 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 25 inches; sandy loam
H3--25 to 60 inches; sandy loam

Sunburg and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 60 inches; sandy loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Gravelly coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; gravelly coarse sandy loam
H2--7 to 20 inches; gravelly loamy coarse sand
H3--20 to 60 inches; gravelly coarse sand

804E--Koronis-Sunburg-Hawick Complex, 18 To 40 Percent Slopes

Component Description

Koronis and similar soils
Extent: 50 percent of the unit
Slope range: 15 to 40 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 5 inches; fine sandy loam
H2--5 to 21 inches; fine sandy loam
H3--21 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 25 percent of the unit
Slope range: 15 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 15 to 40 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 14 inches; gravelly loamy coarse sand
H2--14 to 60 inches; gravelly coarse sand

805C2--Sunburg-Wadenill Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Sunburg and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 60 inches; sandy loam

Wadenill and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 20 inches; loam
H3--20 to 60 inches; sandy loam

805D2--Sunburg-Wadenill Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Sunburg and similar soils
Extent: 65 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 60 inches; sandy loam

Wadenill and similar soils
Extent: 25 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 18 inches; loam
H3--18 to 60 inches; sandy loam

807D2--Koronis-Sunburg Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Koronis and similar soils
Extent: 80 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 25 inches; loam
H3--25 to 60 inches; sandy loam

Sunburg and similar soils
Extent: 15 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 60 inches; sandy loam

875B--Estherville-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 14 inches; sandy loam
H3--14 to 60 inches; gravelly coarse sand

Hawick and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 11 inches; gravelly loamy coarse sand
H3--11 to 60 inches; gravelly coarse sand

875C--Hawick-Estherville Complex, 6 To 12 Percent Slopes

Component Description

Hawick and similar soils
Extent: 60 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 11 inches; gravelly sandy loam
H2--11 to 60 inches; gravelly coarse sand

Estherville and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 13 inches; sandy loam
H3--13 to 60 inches; gravelly coarse sand

887B--Clarion-Swanlake Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 30 inches; clay loam
H3--30 to 60 inches; loam

Swanlake and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 12 inches; loam
H3--12 to 60 inches; loam

899--Harps-Okoboji, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Harps and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 28 inches; loam
H3--28 to 60 inches; loam

Okoboji and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 17 inches; silty clay loam
H2--17 to 47 inches; silty clay loam
H3--47 to 60 inches; silty clay loam

909C2--Bold-Truman Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Bold and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 60 inches; silt loam

Truman and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 31 inches; silt loam
H3--31 to 60 inches; silt loam

909D2--Bold-Truman Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Bold and similar soils
Extent: 65 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 60 inches; silt loam

Truman and similar soils
Extent: 25 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 22 inches; silt loam
H3--22 to 60 inches; silt loam

920B--Clarion-Storden-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December

Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 23 inches; loam
H3--23 to 60 inches; sandy loam

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 37 inches; loam
H3--37 to 60 inches; loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; gravelly sandy loam
H2--9 to 28 inches; gravelly coarse sand
H3--28 to 60 inches; gravelly coarse sand

945D2--Lester-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 70 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 26 inches; clay loam
H3--26 to 60 inches; loam

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:

H1--0 to 5 inches; loam
H2--5 to 28 inches; loam
H3--28 to 60 inches; loam

945E--Lester-Storden Complex, 18 To 40 Percent Slopes

Component Description

Lester and similar soils
Extent: 70 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; clay loam
H3--23 to 60 inches; loam

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 30 inches; loam
H3--30 to 60 inches; loam

956--Canisteo-Glencoe, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Canisteo and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 23 inches; clay loam
H3--23 to 41 inches; clay loam
H4--41 to 60 inches; loam

Glencoe and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 6.4 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 36 inches; clay loam
H3--36 to 60 inches; loam

960C2--Storden-Omsrud Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 65 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; loam
H3--21 to 60 inches; loam

Omsrud and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 25 inches; loam
H3--25 to 60 inches; loam

960D2--Storden-Omsrud Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 65 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Omsrud and similar soils

Extent: 25 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 22 inches; loam
H3--22 to 60 inches; loam

978--Cordova-Rolfe, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Cordova and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 15 inches; clay loam
H2--15 to 39 inches; clay loam
H3--39 to 60 inches; loam

Rolfe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 28 inches; silt loam
H2--28 to 40 inches; silty clay
H3--40 to 60 inches; clay loam

1015--Udipsamments (cut And Fill Land)

Component Description

Udipsamments and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 6 percent
Surface layer texture: Sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained

Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.2 percent
Typical profile:
H1--0 to 14 inches; sand
H2--14 to 60 inches; sand
H3--60 to 80 inches; coarse sand

1016--Udorthents, Loamy (cut And Fill Land)

Component Description

Udorthents
Extent: 85 percent of the unit
Slope range: 0 to 20 percent
Surface layer texture: Loam
Drainage class: Well drained
Flooding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 60 inches; loam
H2--60 to 80 inches;

1030--Pits, Gravel-Udipsamments Complex

Component Description

Pits, gravel
Extent: 45 percent of the unit

Udipsamments
Extent: 45 percent of the unit
Slope range: 0 to 30 percent
Surface layer texture: Sand
Drainage class: Excessively drained
Flooding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.2 percent
Typical profile:
H1--0 to 14 inches; sand
H2--14 to 60 inches; sand
H3--60 to 80 inches; coarse sand

1080--Klossner, Okoboji And Glencoe Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Glencoe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 42 inches; silty clay loam
H2--42 to 50 inches; clay loam
H3--50 to 60 inches; clay loam

Klossner and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 16.3 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 25 inches; muck
H2--25 to 60 inches; silty clay loam

Okoboji and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
H1--0 to 10 inches; mucky silty clay loam
H2--10 to 42 inches; silty clay loam
H3--42 to 60 inches; silty clay loam

1096--Fieldon-Dassel, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Fieldon and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 26 inches; fine sandy loam
H3--26 to 60 inches; stratified fine sand to fine sandy loam

Dassel and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March

Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 11.5 percent
Typical profile:
H1--0 to 21 inches; loam
H2--21 to 32 inches; stratified loamy fine sand to fine sandy loam
H3--32 to 60 inches; stratified fine sand to loamy very fine sand to fine sandy loam

1097--Mayer-Biscay, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Mayer and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 25 inches; gravelly loam
H3--25 to 60 inches; gravelly sand

Biscay and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 25 inches; clay loam
H3--25 to 28 inches; gravelly sandy loam
H4--28 to 60 inches; gravelly loamy sand

1098--Biscay-Biscay, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Biscay and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 25 inches; loam
H3--25 to 60 inches; gravelly coarse sand

Biscay and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
1.8 feet August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 22 inches; clay loam
H3--22 to 26 inches; gravelly sandy loam
H4--26 to 60 inches; gravelly loamy coarse sand

1099--Granby Loamy Fine Sand, Very Wet, 0 To 1 Percent Slopes

Component Description

Granby and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 12 inches; loamy fine sand
H2--12 to 24 inches; fine sand
H3--24 to 60 inches; loamy fine sand

1100--Nicollet Silty Clay Loam, 1 To 3 Percent Slopes

Component Description

Nicollet and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April

Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; silty clay loam
H2--13 to 26 inches; clay loam
H3--26 to 60 inches; clay loam

1101--Webster Silty Clay Loam, Moderately Fine Substratum, 0 To 2 Percent Slopes

Component Description

Webster and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 19 inches; silty clay loam
H2--19 to 24 inches; clay loam
H3--24 to 60 inches; loam

1159B--Strout-Arkton Complex, 2 To 6 Percent Slopes

Component Description

Strout and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; clay
H2--10 to 24 inches; clay loam
H3--24 to 60 inches; clay loam

Arkton and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; clay loam

H2--9 to 25 inches; clay
H3--25 to 60 inches; clay loam

1161--Barry Loam, 0 To 2 Percent Slopes

Component Description

Barry and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 33 inches; sandy clay loam
H3--33 to 60 inches; sandy loam

1162A--Kandiyohi Clay, 0 To 2 Percent Slopes

Component Description

Kandiyohi and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 11 inches; clay
H2--11 to 26 inches; clay
H3--26 to 33 inches; clay
H4--33 to 60 inches; clay

1162B--Kandiyohi Clay, 2 To 5 Percent Slopes

Component Description

Kandiyohi and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; clay
H2--10 to 23 inches; silty clay
H3--23 to 29 inches; clay loam

H4--29 to 60 inches; clay loam

1163--Cohoctah Loam, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Cohoctah and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 22 inches; loam
H3--22 to 60 inches; stratified sand to loamy fine sand to fine sandy loam

1165--Lundlake Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Lundlake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 14 inches; silty clay loam
H2--14 to 35 inches; loam
H3--35 to 47 inches; loam
H4--47 to 60 inches; sandy loam

1168--Swedegrove-Lundlake, Derpessional Complex, 0 To 2 Percent Slopes

Component Description

Swedegrove and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

1.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 31 inches; loam
H3--31 to 60 inches; sandy loam

Lundlake and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 28 inches; loam
H3--28 to 36 inches; loam
H4--36 to 60 inches; sandy loam

1169--Corvuso-Lura, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Corvuso and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 28 inches; clay
H3--28 to 60 inches; clay loam

Lura and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):

0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 26 inches; silty clay
H2--26 to 60 inches; silty clay

1171C--Newlondon-Strout Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Newlondon and similar soils
Extent: 65 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 38 inches; clay loam
H3--38 to 60 inches; clay loam

Strout and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 23 inches; clay loam
H3--23 to 60 inches; clay loam

1171D--Newlondon-Strout Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Newlondon and similar soils
Extent: 80 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 1.2 percent

Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 38 inches; clay loam
H3--38 to 60 inches; clay loam

Strout and similar soils
Extent: 15 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.6 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 19 inches; clay loam
H3--19 to 60 inches; clay loam

1172C--Sparta-Gardencity Complex, 6 To 12 Percent Slopes

Component Description

Sparta and similar soils
Extent: 70 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.2 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 18 inches; loamy sand
H2--18 to 55 inches; loamy fine sand
H3--55 to 60 inches; sand

Gardencity and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 7 inches; fine sandy loam
H2--7 to 24 inches; stratified fine sand to very fine sandy loam
H3--24 to 60 inches; stratified fine sand to silt loam

1173--Muskego And Klossner Soils, Depressional, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Muskego and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Very poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status: At the surface all year
Ponding: None
Available water capacity to a depth of 60 inches: 21.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 45 inches; muck
H2--45 to 60 inches; mucky silt loam

Klossner and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status: At the surface all year
Ponding: None
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 22 inches; muck
H2--22 to 45 inches; mucky silt loam
H3--45 to 60 inches; silt loam

1174--Danielson Clay Loam, 1 To 3 Percent Slopes

Component Description

Danielson and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Drainageway
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 36 inches; silty clay
H3--36 to 51 inches; silty clay
H4--51 to 60 inches; silty clay loam

1175--Swedegrove Loam, 0 To 2 Percent Slopes

Component Description

Swedegrove and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April

Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 20 inches; sandy loam
H3--20 to 60 inches; sandy loam

1176--Litchfield Sandy Loam, 0 To 2 Percent Slopes

Component Description

Litchfield and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 17 inches; sandy loam
H2--17 to 33 inches; loamy sand
H3--33 to 60 inches; sand

1177C--Gardencity-Bold Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Gardencity and similar soils
Extent: 70 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; fine sandy loam
H2--13 to 25 inches; very fine sandy loam
H3--25 to 60 inches; stratified fine sand to silt loam

Bold and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 60 inches; silt loam

1178--Uniongrove Loam, 0 To 2 Percent Slopes

Component Description

Uniongrove and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat

Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 30 inches; loam
H3--30 to 60 inches; sandy loam

1183--Crowriver Loam, 0 To 2 Percent Slopes

Component Description

Crowriver and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 22 inches; loam
H3--22 to 60 inches; sandy loam

1184--Corvuso Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Corvuso and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 19 inches; silty clay
H2--19 to 26 inches; silty clay
H3--26 to 60 inches; silty clay

1185--Gardencity Fine Sandy Loam, Moderately Wet, 0 To 2 Percent Slopes

Component Description

Gardencity and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent

Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 19 inches; fine sandy loam
H2--19 to 24 inches; fine sandy loam
H3--24 to 60 inches; stratified loamy fine sand to silt loam

1186--Forestcity-Lundlake, Depressional Complex, 0 To 3 Percent Slopes

Component Description

Forestcity and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Drainageway
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; fine sandy loam
H2--22 to 36 inches; loam
H3--36 to 60 inches; loam
H4--60 to 65 inches; fine sandy loam

Lundlake and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 28 inches; loam
H3--28 to 46 inches; loam
H4--46 to 60 inches; sandy loam

1192--Crowriver-Lundlake, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Crowriver and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Rim

Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; fine sandy loam
H2--13 to 17 inches; fine sandy loam
H3--17 to 60 inches; sandy loam

Lundlake and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 22 inches; loam
H2--22 to 28 inches; loam
H3--28 to 35 inches; loam
H4--35 to 60 inches; sandy loam

1193--Cosmos Silty Clay, 0 To 2 Percent Slopes

Component Description

Cosmos and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; silty clay
H2--15 to 30 inches; silty clay
H3--30 to 60 inches; clay loam

1197--Cohoctah Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Cohoctah and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 9.0 percent
Typical profile:
H1--0 to 21 inches; fine sandy loam
H2--21 to 36 inches; fine sandy loam
H3--36 to 60 inches; stratified loamy sand to sandy loam to loam

1198B--Rohrbeck-Koronis Complex, 1 To 6 Percent Slopes

Component Description

Rohrbeck and similar soils
Extent: 55 percent of the unit
Slope range: 1 to 5 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 6 inches; loamy sand
H2--6 to 25 inches; loamy sand
H3--25 to 41 inches; sandy loam
H4--41 to 60 inches; sandy loam

Koronis and similar soils
Extent: 35 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 28 inches; loam
H3--28 to 60 inches; sandy loam

1199--Klossner And Lundlake Soils, Ponded

Component Description

Klossner and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 19.2 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:

H1--0 to 38 inches; muck
H2--38 to 60 inches; mucky silty clay loam

Lundlake and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 15.0 percent
Typical profile:
H1--0 to 26 inches; mucky loam
H2--26 to 56 inches; loam
H3--56 to 60 inches; sandy loam

1203--Muskego, Blue Earth, And Houghton Soils, Ponded

Component Description

Blue earth and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 50 inches; mucky silt loam
H2--50 to 60 inches; mucky silt loam

Houghton and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
H1--0 to 60 inches; muck

Muskego and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 29 inches; mucky silt loam, coprogenous earth
H3--29 to 60 inches; loam

1204B--Reedslake Loam, 2 To 5 Percent Slopes

Component Description

Reedslake and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 26 inches; clay loam
H3--26 to 60 inches; loam

1213C--Cokato-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Cokato and similar soils
Extent: 70 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 41 inches; clay loam
H3--41 to 60 inches; loam

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 18 inches; loam
H3--18 to 60 inches; loam

1220C--Cokato-Storden-Hawick Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Cokato and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 29 inches; clay loam
H3--29 to 60 inches; loam

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
H1--0 to 8 inches; gravelly sandy loam
H2--8 to 33 inches; gravelly loamy coarse sand
H3--33 to 60 inches; gravelly coarse sand

1356--Water, Miscellaneous

Component Description

Water
Extent: 100 percent of the unit

1362B--Angus Loam, 2 To 5 Percent Slopes

Component Description

Angus and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 35 inches; clay loam
H3--35 to 60 inches; loam

1383A--Shorewood Silty Clay Loam, Moderately Wet, 0 To 3 Percent Slopes

Component Description

Shorewood and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 46 inches; silty clay
H3--46 to 60 inches; silty clay loam

1384--Minneopa Loam, 0 To 2 Percent Slopes

Component Description

Minneopa and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 15 inches; sandy loam
H3--15 to 25 inches; gravelly loamy sand
H4--25 to 60 inches; gravelly sand

1385--Havelock Loam, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Havelock and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August

Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 38 inches; loam
H3--38 to 60 inches; loam

1387A--Collinwood Silty Clay Loam, Moderately Wet, 0 To 3 Percent Slopes

Component Description

Collinwood and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 13 inches; silty clay loam
H2--13 to 32 inches; silty clay
H3--32 to 60 inches; silty clay loam

1391B--Wadenill-Sunburg Complex, 2 To 6 Percent Slopes

Component Description

Wadenill and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 25 inches; loam
H3--25 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches;
H2--7 to 60 inches;

1406--Medo, Dassel And Biscay Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Biscay and similar soils
Extent: 30 percent of the unit

Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; mucky loam
H2--10 to 29 inches; loam
H3--29 to 60 inches; stratified loamy sand to gravelly coarse sand

Dassel and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 9.0 percent
Typical profile:
H1--0 to 14 inches; fine sandy loam
H2--14 to 31 inches; stratified loamy fine sand to fine sandy loam
H3--31 to 60 inches; stratified loamy sand to coarse sand

Medo and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet June July August September October
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 35.0 percent
Typical profile:
H1--0 to 20 inches; muck
H2--20 to 28 inches; mucky silt loam
H3--28 to 34 inches; sandy loam
H4--34 to 60 inches; fine sand

1801B--Gardencity Very Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Gardencity and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August

September October December
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; very fine sandy loam
H2--13 to 34 inches; very fine sandy loam
H3--34 to 60 inches; stratified loamy very fine sand to very fine sandy loam

W--Water

Component Description

Water
Extent: 100 percent of the unit

Mille Lacs County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Morrison County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Soil Descriptions - Non Technical

2A--Ostrander Loam, 0 To 2 Percent Slopes

Component Description

Ostrander and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 20 inches; silt loam
H3--20 to 50 inches; sandy clay loam
H4--50 to 60 inches; loam

2B--Ostrander Loam, 2 To 6 Percent Slopes

Component Description

Ostrander and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 20 inches; silt loam
H3--20 to 50 inches; sandy clay loam
H4--50 to 60 inches; loam

23--Skyberg Silt Loam

Component Description

Skyberg and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:

H1--0 to 12 inches; silt loam
H2--12 to 21 inches; silty clay loam
H3--21 to 50 inches; loam
H4--50 to 60 inches; loam

24B--Kasson Silt Loam, 1 To 4 Percent Slopes

Component Description

Kasson and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 16 inches; silty clay loam
H3--16 to 60 inches; loam

27A--Dickinson Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 16 inches; fine sandy loam
H2--16 to 30 inches; fine sandy loam
H3--30 to 40 inches; loamy sand
H4--40 to 60 inches; sand

27B--Dickinson Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 16 inches; fine sandy loam
H2--16 to 30 inches; fine sandy loam
H3--30 to 40 inches; loamy sand
H4--40 to 60 inches; sand

30B--Kenyon Silt Loam, 1 To 6 Percent Slopes

Component Description

Kenyon and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 24 inches; silt loam
H2--24 to 48 inches; loam
H3--48 to 60 inches; loam

44--Ankeny Fine Sandy Loam

Component Description

Ankeny and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding does not occur (months):
January February November December
Flooding is most likely (frequency, months):
Occasional April May June July August
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 30 inches; fine sandy loam
H2--30 to 54 inches; fine sandy loam
H3--54 to 60 inches; fine sandy loam

79B--Billett Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Billett and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; fine sandy loam
H2--7 to 24 inches; sandy loam
H3--24 to 40 inches; loamy fine sand
H4--40 to 60 inches; sand

83--Maxcreek Silty Clay Loam, Swales

Component Description

Maxcreek and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
1.6 feet February
Ponding is shallowest (depth, months):
0.2 foot May June July August September
October
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 30 inches; silt loam
H3--30 to 39 inches; loam
H4--39 to 60 inches; loam

88--Clyde Silty Clay Loam

Component Description

Clyde and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 27 inches; loam
H3--27 to 50 inches; sandy loam
H4--50 to 60 inches; loam

99A--Racine Silt Loam, 0 To 2 Percent Slopes

Component Description

Racine and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 20 inches; silt loam
H3--20 to 45 inches; loam
H4--45 to 60 inches; loam

99B--Racine Silt Loam, 2 To 6 Percent Slopes

Component Description

Racine and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 20 inches; silt loam
H3--20 to 45 inches; loam
H4--45 to 60 inches; loam

99C--Racine Silt Loam, 6 To 12 Percent Slopes

Component Description

Racine and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 20 inches; silt loam
H3--20 to 45 inches; loam
H4--45 to 60 inches; loam

129--Cylinder Loam

Component Description

Cylinder and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet January March April May June
October November December
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 31 inches; loam
H3--31 to 60 inches; gravelly sand

135--Donnan Silt Loam

Component Description

Donnan and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August

September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 18 inches; silt loam
H2--18 to 29 inches; clay loam
H3--29 to 60 inches; silty clay

156A--Fairhaven Silt Loam, 0 To 2 Percent Slopes

Component Description

Fairhaven and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 30 inches; loam
H3--30 to 60 inches; stratified gravelly coarse sand to sand

156B--Fairhaven Silt Loam, 2 To 6 Percent Slopes

Component Description

Fairhaven and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 30 inches; loam
H3--30 to 60 inches; stratified gravelly coarse sand to sand

190--Hayfield Loam

Component Description

Hayfield and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.3 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 13 inches; loam
H3--13 to 29 inches;
H4--29 to 60 inches; coarse sand

228B--Mottland Loam, 2 To 6 Percent Slopes

Component Description

Mottland and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Channery loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; channery loam
H2--7 to 60 inches; channery sandy loam

228C--Mottland Loam, 6 To 12 Percent Slopes

Component Description

Mottland and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Channery loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; channery loam
H2--7 to 60 inches; channery sandy loam

244A--Lilah Sandy Loam, 0 To 2 Percent Slopes

Component Description

Lilah and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 36 inches; gravelly loamy sand
H4--36 to 60 inches; gravelly coarse sand

244B--Lilah Sandy Loam, 2 To 6 Percent Slopes

Component Description

Lilah and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 36 inches; gravelly loamy sand
H4--36 to 60 inches; gravelly coarse sand

244C--Lilah Sandy Loam, 6 To 12 Percent Slopes

Component Description

Lilah and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 36 inches;
H4--36 to 60 inches; gravelly coarse sand

252--Marshan Clay Loam

Component Description

Marshan and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June October
November
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; clay loam
H2--14 to 26 inches; clay loam
H3--26 to 29 inches; sandy loam
H4--29 to 60 inches; gravelly coarse sand

253--Maxcreek Silty Clay Loam

Component Description

Maxcreek and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 28 inches; silt loam
H3--28 to 35 inches; loam
H4--35 to 60 inches; loam

255--Mayer Loam

Component Description

Mayer and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June October November
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; loam
H2--20 to 36 inches; sandy loam
H3--36 to 60 inches; gravelly coarse sand

295--Readlyn Silt Loam

Component Description

Readlyn and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 22 inches; silt loam
H2--22 to 47 inches; loam
H3--47 to 60 inches; loam

307--Sargeant Silt Loam

Component Description

Sargeant and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April

Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 12 inches; silt loam
H2--12 to 22 inches; silt loam
H3--22 to 45 inches; loam
H4--45 to 60 inches; loam

313--Spillville Loam, Occasionally Flooded

Component Description

Spillville and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
3.0 feet March April May June November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 52 inches; loam
H2--52 to 60 inches; sandy loam

331--Tripoli Silty Clay Loam

Component Description

Tripoli and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 23 inches; silty clay loam
H2--23 to 47 inches; loam
H3--47 to 60 inches; loam

334B--Vlasaty Silt Loam, 1 To 4 Percent Slopes

Component Description

Vlasaty and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):

1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 16 inches; silty clay loam
H3--16 to 50 inches; clay loam
H4--50 to 60 inches; loam

376B--Moland Silt Loam, 1 To 6 Percent Slopes

Component Description

Moland and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 14 inches; silt loam
H2--14 to 19 inches; loam
H3--19 to 45 inches; loam
H4--45 to 60 inches; loam

377--Merton Silt Loam

Component Description

Merton and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 16 inches; silt loam
H2--16 to 23 inches; silt loam
H3--23 to 60 inches; loam

380--Havana Silt Loam

Component Description

Havana and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None

Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 22 inches; silty clay loam
H3--22 to 40 inches; loam
H4--40 to 60 inches; loam

381--Newry Silt Loam

Component Description

Newry and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 18 inches; silty clay loam
H3--18 to 42 inches; loam
H4--42 to 60 inches; loam

382B--Blooming Silt Loam, 2 To 6 Percent Slopes

Component Description

Blooming and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 21 inches; silty clay loam
H3--21 to 45 inches; loam
H4--45 to 60 inches; loam

382C--Blooming Silt Loam, 6 To 15 Percent Slopes

Component Description

Blooming and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 21 inches; silty clay loam
H3--21 to 45 inches; loam
H4--45 to 60 inches; loam

393--Udolpho Silt Loam

Component Description

Udolpho and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June October
November
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 21 inches; loam
H3--21 to 27 inches; loam
H4--27 to 60 inches; gravelly coarse sand

444--Canisteo Silty Clay Loam

Component Description

Canisteo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; silty clay loam
H2--15 to 27 inches; silty clay loam
H3--27 to 36 inches; loam
H4--36 to 60 inches; loam

465--Kalmarville Loam, Frequently Flooded

Component Description

Kalmarville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):

2.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 50 inches; stratified sandy loam to fine sandy loam to silt loam
H3--50 to 60 inches; stratified sand to loamy fine sand

467--Sawmill Silty Clay Loam

Component Description

Sawmill and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November December
Flooding is most likely (frequency, months):
Frequent March April May
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 29 inches; silty clay loam
H2--29 to 36 inches; silty clay loam
H3--36 to 60 inches; silty clay loam

479--Floyd Silt Loam

Component Description

Floyd and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; silt loam
H2--17 to 39 inches; sandy clay loam
H3--39 to 60 inches; loam

483A--Waukee Loam, 0 To 2 Percent Slopes

Component Description

Waukee and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 27 inches; loam
H3--27 to 60 inches; gravelly sand

483B--Waukee Loam, 2 To 6 Percent Slopes

Component Description

Waukee and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 27 inches; loam
H3--27 to 60 inches; gravelly sand

485--Lawler Silt Loam

Component Description

Lawler and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet January March April May June
October November December
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 20 inches; silt loam
H2--20 to 29 inches; loam
H3--29 to 60 inches; gravelly coarse sand

516A--Dowagiac Loam, 0 To 2 Percent Slopes

Component Description

Dowagiac and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 25 inches; clay loam
H3--25 to 30 inches; sandy loam
H4--30 to 60 inches; gravelly coarse sand

516B--Dowagiac Loam, 2 To 6 Percent Slopes

Component Description

Dowagiac and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 25 inches; clay loam
H3--25 to 30 inches; sandy loam
H4--30 to 60 inches; gravelly coarse sand

517--Shandep Clay Loam

Component Description

Shandep and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
0.8 foot August
Ponding does not occur (months):
January February December
Ponding is deepest (depth, months):
0.5 foot March April May June
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 29 inches; clay loam
H2--29 to 36 inches; loam
H3--36 to 42 inches; sandy loam
H4--42 to 60 inches; gravelly coarse sand

539--Palms Muck

Component Description

Palms and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
1.6 feet February
Ponding is shallowest (depth, months):
0.2 foot May November
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 17.8 inches
Content of organic matter in the upper 10 inches: 87.0 percent

Typical profile:
H1--0 to 10 inches; muck
H2--10 to 32 inches; muck
H3--32 to 60 inches; silty clay loam

631--Oran Silt Loam, 1 To 4 Percent Slopes

Component Description

Oran and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 21 inches; silt loam
H2--21 to 48 inches; loam
H3--48 to 60 inches; loam

632--Kensett Variant Silt Loam

Component Description

Kensett variant and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 24 inches; clay loam
H3--24 to 60 inches; channery silt loam

633B--Nordness Variant Loam, 2 To 6 Percent Slopes

Component Description

Nordness variant and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 18 inches; clay loam
H3--18 to 60 inches; channery silt loam

634--Protivin Silt Loam

Component Description

Protivin and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 20 inches; clay loam
H3--20 to 60 inches; clay loam

635--Riceville Silt Loam

Component Description

Riceville and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 17 inches; clay loam
H3--17 to 40 inches; clay loam
H4--40 to 60 inches;

637--Schley Silt Loam

Component Description

Schley and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 19 inches; silt loam
H2--19 to 28 inches; sandy loam
H3--28 to 60 inches; sandy clay loam

638B--Taopi Silt Loam, 1 To 6 Percent Slopes

Component Description

Taopi and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 24 inches; clay loam
H3--24 to 30 inches; clay
H4--30 to 60 inches; cobbly silt loam

638C--Taopi Silt Loam, 6 To 12 Percent Slopes

Component Description

Taopi and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 24 inches; clay loam
H3--24 to 30 inches; clay
H4--30 to 60 inches; cobbly silt loam

699A--Rossfield Silt Loam, 0 To 2 Percent Slopes

Component Description

Rossfield and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 29 inches; loam
H3--29 to 60 inches; channery sandy loam

699B--Rossfield Silt Loam, 2 To 6 Percent Slopes

Component Description

Rossfield and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 29 inches; loam
H3--29 to 60 inches; channery sandy loam

1013--Pits, Quarry

Component Description

Pits
Extent: 100 percent of the unit

1030--Udorthents-Pits Complex

Component Description

Udorthents and similar soils
Extent: 60 percent of the unit
Slope range: 0 to 30 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 60 inches;
H2--60 to 80 inches;

Pits and similar soils
Extent: 40 percent of the unit
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

1078--Udorthents, Nearly Level To Sloping

Component Description

Udorthents and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 30 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 60 inches;
H2--60 to 80 inches;

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

1812--Terril Silt Loam

Component Description

Terril and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 23 inches; silt loam
H2--23 to 43 inches; loam
H3--43 to 60 inches; coarse sand

1814B--Waucoma Silt Loam, 1 To 6 Percent Slopes

Component Description

Waucoma and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 14 inches; silt loam
H2--14 to 40 inches; loam
H3--40 to 45 inches; clay loam
H4--45 to 60 inches; channery silt loam

1841--Hayfield Loam, Loamy Substratum

Component Description

Hayfield and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 28 inches; loam
H3--28 to 52 inches; gravelly coarse sand
H4--52 to 60 inches; loam

1844--Atkinson Loam

Component Description

Atkinson and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (paralithic): 40 to 60 inches
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:

H1--0 to 12 inches; loam
H2--12 to 43 inches; loam
H3--43 to 45 inches; clay
H4--45 to 60 inches; channery silt loam

1884--Stateline Silt Loam

Component Description

Stateline and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 18 inches; silty clay loam
H3--18 to 60 inches; clay

1891--Faxon Variant Silty Clay Loam

Component Description

Faxon variant and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 10.0 percent
Typical profile:
H1--0 to 14 inches; silty clay loam
H2--14 to 37 inches; clay loam
H3--37 to 60 inches; channery silt loam

1903--Udolpho Silt Loam, Loamy Substratum, Swales

Component Description

Udolpho and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
1.6 feet February
Ponding is shallowest (depth, months):
0.2 foot March May June October November

Ponding is deepest (depth, months):
0.3 foot April
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 14 inches; silt loam
H3--14 to 30 inches; loam
H4--30 to 48 inches; gravelly coarse sand
H5--48 to 60 inches; loam

1904--Udolpho Silt Loam, Loamy Substratum

Component Description

Udolpho and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 13 inches; silt loam
H3--13 to 27 inches; loam
H4--27 to 51 inches; gravelly coarse sand
H5--51 to 60 inches; loam

1905--Brownsdale Silt Loam

Component Description

Brownsdale and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 26 inches; silty clay loam
H3--26 to 48 inches; loam
H4--48 to 60 inches; loam

1974--Coland-Spillville Loams, Frequently Flooded

Component Description

Coland and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October December
Flooding is most likely (frequency, months):
Frequent April May June
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 60 inches; silty clay loam

Spillville and similar soils
Extent: 30 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January August September October December
Flooding is most likely (frequency, months):
Frequent April May
Wet soil moisture status is highest (depth, months):
3.0 feet March April May June November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 52 inches; loam
H2--52 to 60 inches; sandy loam

1992--Sargeant Variant Silt Loam

Component Description

Sargeant variant and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May November
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 14 inches; silt loam
H2--14 to 32 inches; clay loam
H3--32 to 60 inches; clay

W--Water

Component Description

Water
Extent: 100 percent of the unit

Murray County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

27A--Dickinson Loam, 0 To 2 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 19 inches; loam
H2--19 to 29 inches; sandy loam
H3--29 to 36 inches; loamy sand
H4--36 to 60 inches; fine sand

27B--Dickinson Loam, 2 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace on hill
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 25 inches; fine sandy loam
H3--25 to 33 inches; loamy fine sand
H4--33 to 60 inches; fine sand

35--Blue Earth Mucky Silt Loam

Component Description

Blue earth and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August

Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 8 inches; mucky silt loam
H2--8 to 60 inches; mucky silty clay loam

39A--Wadena Loam, 0 To 2 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 36 inches; clay loam
H3--36 to 60 inches; sand

39B--Wadena Loam, 2 To 6 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 37 inches; clay loam
H3--37 to 60 inches; sand

41B--Estherville Sandy Loam, 1 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 16 inches; loam

H3--16 to 60 inches; gravelly coarse sand

84--Brownton Silty Clay

Component Description

Brownton and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on moraine
Rim on depression on moraine
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; silty clay
H2--20 to 41 inches; silty clay loam
H3--41 to 60 inches; clay loam

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Rim on depression on moraine
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 26 inches; clay loam
H3--26 to 60 inches; loam

94B--Terril Loam, 1 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Hill on stream terrace
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches

Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 26 inches; loam
H2--26 to 34 inches; loam
H3--34 to 60 inches; loam

94C--Terril Loam, 6 To 12 Percent Slopes

Component Description

Terril and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Hill on stream terrace
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 23 inches; loam
H2--23 to 50 inches; loam
H3--50 to 60 inches; loam

100B--Copaston Loam, 1 To 6 Percent Slopes

Component Description

Copaston and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 12 to 20 inches
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 1.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 19 inches; loam
H3--19 to 29 inches;

102B--Clarion Loam, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 13 inches; loam

H2--13 to 39 inches; loam
H3--39 to 60 inches; loam

106B--Lester Loam, 2 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 40 inches; clay loam
H3--40 to 60 inches; clay loam

106C2--Lester Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 24 inches; clay loam
H3--24 to 60 inches; loam

109--Cordova Clay Loam

Component Description

Cordova and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on moraine
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 14 inches; clay loam

H2--14 to 30 inches; clay loam
H3--30 to 60 inches; loam

110--Marna Silty Clay Loam

Component Description

Marna and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on moraine
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 25 inches; silty clay
H3--25 to 60 inches; clay loam

112--Harps Clay Loam

Component Description

Harps and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rim on depression on moraine
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 19 inches; clay loam
H2--19 to 31 inches; clay loam
H3--31 to 60 inches; clay loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on moraine
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 19 inches; clay loam
H2--19 to 26 inches; clay loam
H3--26 to 60 inches; loam

114--Glencoe Silty Clay Loam

Component Description

Glencoe and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 27 inches; silty clay loam
H3--27 to 38 inches; clay loam
H4--38 to 60 inches; loam

118--Crippin Loam

Component Description

Crippin and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 31 inches; loam
H3--31 to 60 inches; loam

130--Nicollet Clay Loam

Component Description

Nicollet and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None

Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 34 inches; clay loam
H3--34 to 60 inches; clay loam

134--Okoboji Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 50 inches; silty clay loam
H3--50 to 60 inches; stratified loam to silt loam to silty clay loam

196--Joliet Silty Clay Loam

Component Description

Joliet and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on stream terrace
Swale on stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Bedrock (lithic): 10 to 20 inches
Drainage class: Poorly drained
Flooding does not occur (months):
January February March July August September October November December
Flooding is most likely (frequency, months):
Occasional April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
1.7 feet (transitory) January February July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 17 inches; silty clay loam
H2--17 to 27 inches; fine sandy loam

206--Kasota Loam

Component Description

Kasota and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on stream terrace
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 33 inches; clay
H3--33 to 60 inches; sand

221--Canisteo Silty Clay Loam, Depressional

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches;
H2--16 to 36 inches;
H3--36 to 60 inches;

239--Le Sueur Clay Loam

Component Description

Le sueur and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; clay loam
H2--15 to 32 inches; clay loam
H3--32 to 60 inches; clay loam

269--Millington Clay Loam

Component Description

Millington and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Swale on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 31 inches; clay loam
H2--31 to 43 inches; clay loam
H3--43 to 60 inches; stratified sandy loam to silt loam to clay loam

283A--Plainfield Loamy Sand, 0 To 2 Percent Slopes

Component Description

Plainfield and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 7 inches; loamy sand
H2--7 to 36 inches; loamy sand
H3--36 to 60 inches; sand

283B--Plainfield Loamy Sand, 2 To 6 Percent Slopes

Component Description

Plainfield and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 9 inches; loamy sand
H2--9 to 20 inches; loamy sand
H3--20 to 60 inches; sand

283C--Plainfield Loamy Sand, 6 To 15 Percent Slopes

Component Description

Plainfield and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 6 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 7 inches; loamy sand
H2--7 to 36 inches; loamy sand
H3--36 to 60 inches; sand

317--Oshawa Silty Clay Loam

Component Description

Oshawa and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June July
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 60 inches; silt loam

321--Tilfer Silty Clay Loam

Component Description

Tilfer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on stream terrace
Swale on stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Bedrock (lithic): 20 to 40 inches
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Occasional April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.3 feet (transitory) January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 20 inches; silty clay loam

H2--20 to 27 inches; loam

327A--Dickman Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on stream terrace
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 18 inches; sandy loam
H3--18 to 60 inches; sand

327B--Dickman Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 14 inches; sandy loam
H3--14 to 60 inches; sand

329--Chaska Loam

Component Description

Chaska and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 35 inches; stratified fine sandy loam to loam to silt
loam to silty clay loam
H3--35 to 60 inches; stratified silt loam to silty clay loam

336--Delft Clay Loam

Component Description

Delft and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Drainageway on moraine
Swale on moraine
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 36 inches; clay loam
H3--36 to 51 inches; clay loam
H4--51 to 60 inches; clay loam

386--Okoboji Mucky Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
H1--0 to 12 inches; mucky silty clay loam
H2--12 to 48 inches; silty clay loam
H3--48 to 60 inches; silty clay loam

463A--Minneiska Sandy Loam, 0 To 2 Percent Slopes

Component Description

Minneiska and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June July
Wet soil moisture status is highest (depth, months):

2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 60 inches; stratified sand to fine sandy loam to loam to silt loam

463B--Minneiska Loam, 1 To 4 Percent Slopes

Component Description

Minneiska and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Hill on flood plain
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 3.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; stratified sand to sandy loam to fine sandy loam to loam to silt loam

525--Muskego Muck

Component Description

Muskego and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 8 inches; muck
H2--8 to 25 inches; muck
H3--25 to 60 inches; coprogenous earth

539--Klossner Muck

Component Description

Klossner and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 14.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 26 inches; mucky silty clay loam
H3--26 to 48 inches; silty clay loam
H4--48 to 60 inches; clay loam

574--Du Page Loam

Component Description

Du page and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 60 inches; loam

575--Nishna Silty Clay Loam

Component Description

Nishna and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Swale on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 20 inches; silty clay loam
H2--20 to 60 inches; silty clay

611F--Hawick Sandy Loam, 18 To 70 Percent Slopes

Component Description

Hawick and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 18 to 70 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 19 inches; gravelly coarse sand
H3--19 to 60 inches; coarse sand

851--Chaska-Minneiska-Urban Land Complex

Component Description

Chaska and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; stratified sand to fine sandy loam to loam

Minneiska and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Stratified sand to fine sand to fine sandy loam to loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches;
H2--10 to 60 inches; stratified sand to fine sand to fine sandy loam to loam

Urban land
Extent: 30 percent of the unit

852--Copaston-Urban Land Complex

Component Description

Copaston and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flat on stream terrace
Hill on stream terrace
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 12 to 20 inches
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 1.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 20 inches; loam
H3--20 to 30 inches;

Urban land
Extent: 40 percent of the unit

854--Cordova-Urban Land Complex

Component Description

Cordova and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 21 inches; clay loam
H2--21 to 44 inches; clay loam
H3--44 to 60 inches; clay loam

Urban land
Extent: 40 percent of the unit
Geomorphic description:
Hill on stream terrace

864B--Plainfield-Urban Land Complex, 0 To 6 Percent Slopes

Component Description

Plainfield and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 0 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:

H1--0 to 10 inches; loamy sand
H2--10 to 15 inches; loamy sand
H3--15 to 60 inches; fine sand

Urban land
Extent: 40 percent of the unit

864C--Plainfield-Urban Land Complex, 6 To 15 Percent Slopes

Component Description

Plainfield and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 6 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 8 inches; loamy sand
H2--8 to 20 inches; loamy sand
H3--20 to 60 inches; sand

Urban land
Extent: 30 percent of the unit

920B--Clarion-Storden-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 29 inches; loam
H3--29 to 60 inches; loam

Hawick and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 22 inches; loamy sand
H3--22 to 60 inches; sand

Storden and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 37 inches; loam
H3--37 to 60 inches; loam

920C2--Clarion-Storden-Hawick Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 29 inches; loam
H3--29 to 60 inches; loam

Hawick and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.7 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 23 inches; gravelly coarse sand
H3--23 to 60 inches; sand

Storden and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches

Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 60 inches; loam

921B--Clarion-Storden Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 23 inches; loam
H3--23 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

921C2--Clarion-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Storden and similar soils

Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 60 inches; loam

923--Copaston-Rock Outcrop Complex, 2 To 60 Percent Slopes

Component Description

Copaston and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Hill on stream terrace
Slope range: 2 to 60 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 12 to 20 inches
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 1.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 1.7 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 9 inches; loam
H3--9 to 19 inches;

Rock outcrop
Extent: 20 percent of the unit

944F--Lester-Storden-Estherville Complex, 18 To 70 Percent Slopes

Component Description

Lester and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 18 to 70 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 20 inches; loam
H3--20 to 60 inches; loam

Estherville and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 18 to 70 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 13 inches; sandy loam
H3--13 to 60 inches; coarse sand

Storden and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 18 to 70 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

945D2--Lester-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 20 inches; loam
H3--20 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 24 inches; loam
H3--24 to 60 inches; loam

945F--Lester-Storden Complex, 18 To 70 Percent Slopes

Component Description

Lester and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 18 to 70 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 26 inches; clay loam
H3--26 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 18 to 70 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
H1--0 to 4 inches; loam
H2--4 to 12 inches; loam
H3--12 to 60 inches; clay loam

956--Canisteo-Glencoe Complex

Component Description

Canisteo and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Rim on depression on moraine
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 22 inches; clay loam
H3--22 to 30 inches; clay loam
H4--30 to 60 inches; clay loam

Glencoe and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 20 inches; silty clay loam
H3--20 to 28 inches; clay loam
H4--28 to 60 inches; loam

960D2--Storden-Clarion Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 24 inches; loam
H3--24 to 60 inches; loam

Clarion and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 25 inches; loam
H3--25 to 60 inches; loam

960F--Storden-Clarion Complex, 18 To 50 Percent Slopes

Component Description

Storden and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 18 to 50 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 60 inches; loam

Clarion and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 18 to 50 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 24 inches; loam
H3--24 to 60 inches; loam

978--Cordova-Rolfe Complex

Component Description

Cordova and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flat on moraine
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 41 inches; clay loam
H3--41 to 60 inches; clay loam

Rolfe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 17 inches; silt loam
H2--17 to 36 inches; silty clay
H3--36 to 60 inches; loam

1030--Udorthents-Pits, Gravel, Complex

Component Description

Udorthents and similar soils
Extent: 50 percent of the unit
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:

H1--0 to 60 inches; loam
H2--60 to 80 inches; variable

Pits
Extent: 40 percent of the unit

1075--Klossner-Muskego Complex, Ponded

Component Description

Klossner and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 19.6 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 40 inches; muck
H2--40 to 60 inches; loam

Muskego and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 19.2 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 35 inches; muck
H2--35 to 60 inches; coprogenous earth

1083--Le Sueur-Urban Land Complex

Component Description

Le sueur and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; clay loam
H2--15 to 30 inches; clay loam
H3--30 to 60 inches; clay loam

Urban land
Extent: 40 percent of the unit

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

1901B--Le Sueur-Lester Complex, 1 To 6 Percent Slopes

Component Description

Le sueur and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 4 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; clay loam
H2--15 to 37 inches; clay loam
H3--37 to 60 inches; loam

Lester and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 25 inches; clay loam
H3--25 to 60 inches; loam

1917--Nishna Silty Clay, Ponded

Component Description

Nishna and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Backswamp on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February December
Flooding is most likely (frequency, months):
Frequent March April May June July August
September October November
Wet soil moisture status: At the surface all year
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 35 inches; silty clay

H2--35 to 60 inches; silty clay loam

1931--Essexville Sandy Loam

Component Description

Essexville and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Beach ridge on moraine
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 25 inches; loamy fine sand
H3--25 to 60 inches; loam

1999--Minneiska-Kalmarville Complex, Frequently Flooded

Component Description

Minneiska and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 60 inches; stratified sand to loamy fine sand to fine
sandy loam to silt loam

Kalmarville and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flat on flood plain
Meander on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Loamy fine sand, loam, silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 46 inches; loamy fine sand, loam, silt loam
H2--46 to 60 inches; sand

W--Water

Component Description

Census water
Extent: 95 percent of the unit

Nobles County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Norman County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Olmsted County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Otter Tail County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Pennington County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Pine County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Pipestone County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Polk County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Pope County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Red Lake County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Redwood County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

27A--Dickinson Loam, 0 To 2 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 32 inches; fine sandy loam
H3--32 to 38 inches; loamy fine sand
H4--38 to 60 inches; fine sand

27B--Dickinson Loam, 2 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 29 inches; fine sandy loam
H3--29 to 60 inches; sand

35--Blue Earth Mucky Silt Loam, 0 To 1 Percent Slopes

Component Description

Blue earth and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Relict lakebed
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches

Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 22 inches; mucky silt loam
H2--22 to 60 inches; mucky silty clay loam

39A--Wadena Loam, 0 To 2 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 18 inches; loam
H2--18 to 37 inches; loam
H3--37 to 60 inches; stratified sand to gravelly coarse sand

39B--Wadena Loam, 2 To 6 Percent Slopes

Component Description

Wadena and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 30 inches; loam
H3--30 to 60 inches; stratified sand to gravelly coarse sand

85--Calco Silty Clay Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Calco and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; silty clay loam
H2--14 to 40 inches; silty clay loam
H3--40 to 60 inches; silty clay loam

86--Canisteo Clay Loam, Moderately Fine Substratum, 0 To 2 Percent Slopes

Component Description

Canisteo and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 23 inches; clay loam
H3--23 to 38 inches; loam
H4--38 to 60 inches; loam

94C--Terril Loam, 6 To 12 Percent Slopes

Component Description

Terril and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 23 inches; loam
H2--23 to 50 inches; loam
H3--50 to 60 inches; loam

Delft
Extent: 15 percent of the unit
Geomorphic description:
Drainageway

102B--Clarion Loam, Moderately Fine Substratum, 2 To 5 Percent Slopes

Component Description

Clarion and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 25 inches; loam
H3--25 to 60 inches; loam

112--Harps Clay Loam, 0 To 2 Percent Slopes

Component Description

Harps and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 13 inches; clay loam
H2--13 to 30 inches; clay loam
H3--30 to 60 inches; loam

113--Webster Clay Loam, 0 To 2 Percent Slopes

Component Description

Webster and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 32 inches; clay loam
H3--32 to 60 inches; loam

118--Crippin Loam, Moderately Fine Substratum, 1 To 3 Percent Slopes

Component Description

Crippin and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 26 inches; loam
H3--26 to 60 inches; loam

128C2--Grogan Silt Loam, 6 To 15 Percent Slopes, Eroded

Component Description

Grogan and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 35 inches; silt loam
H3--35 to 60 inches; stratified loamy very fine sand to silt loam

130--Nicollet Clay Loam, 1 To 3 Percent Slopes

Component Description

Nicollet and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 35 inches; clay loam
H3--35 to 60 inches; loam

134--Okoboji Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Okoboji and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 8 inches; silty clay loam
H2--8 to 28 inches; silty clay loam
H3--28 to 60 inches; silty clay loam

156--Fairhaven Silt Loam, 0 To 2 Percent Slopes

Component Description

Fairhaven and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 18 inches; silt loam
H2--18 to 33 inches; silt loam
H3--33 to 60 inches; stratified gravelly coarse sand to sand

211--Lura Silty Clay, Depressional, 0 To 1 Percent Slopes

Component Description

Lura and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 6.9 percent
Typical profile:
H1--0 to 8 inches; silty clay
H2--8 to 39 inches; silty clay
H3--39 to 60 inches; silty clay loam

227--Lemond Loam, 0 To 2 Percent Slopes

Component Description

Lemond and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 34 inches; sandy loam
H3--34 to 60 inches; sand

247--Linder Loam, 0 To 2 Percent Slopes

Component Description

Linder and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 18 inches; loam
H2--18 to 30 inches; sandy loam
H3--30 to 60 inches; coarse sand

255--Mayer Loam, 0 To 2 Percent Slopes

Component Description

Mayer and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 21 inches; loam
H2--21 to 37 inches; silt loam
H3--37 to 60 inches; gravelly coarse sand

282--Hanska Loam, 0 To 2 Percent Slopes

Component Description

Hanska and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 26 inches; loam
H3--26 to 31 inches; loamy sand
H4--31 to 60 inches; sand

318--Mayer Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Mayer and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; clay loam
H2--23 to 33 inches; silt loam
H3--33 to 60 inches; gravelly coarse sand

327A--Dickman Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 14 inches; sandy loam
H2--14 to 20 inches; sandy loam
H3--20 to 60 inches; sand

327B--Dickman Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dickman and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 11 inches; sandy loam
H2--11 to 20 inches; sandy loam
H3--20 to 60 inches; sand

327C--Dickman Sandy Loam, 6 To 12 Percent Slopes

Component Description

Dickman and similar soils
Extent: 85 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 60 inches; sand

336--Delft Loam, 1 To 3 Percent Slopes

Component Description

Delft and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Drainageway
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 19 inches; loam
H2--19 to 30 inches; clay loam
H3--30 to 49 inches; clay loam
H4--49 to 60 inches; loam

386--Okoboji Mucky Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Okoboji and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
H1--0 to 13 inches; mucky silty clay loam
H2--13 to 35 inches; silty clay loam
H3--35 to 60 inches; silty clay loam

392--Biscay Loam, 0 To 2 Percent Slopes

Component Description

Biscay and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 5.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 24 inches; sandy clay loam
H3--24 to 60 inches; stratified coarse sand to loamy sand

423--Seaforth Loam, 1 To 3 Percent Slopes

Component Description

Seaforth and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 23 inches; loam
H3--23 to 60 inches;

446--Normania Loam, 1 To 3 Percent Slopes

Component Description

Normania and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 20 inches; loam
H3--20 to 29 inches; loam
H4--29 to 60 inches; loam

463A--Minneiska Silt Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Minneiska and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None

Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; stratified sand to loamy fine sand to loam

463B--Minneiska Loam, 1 To 4 Percent Slopes, Rarely Flooded

Component Description

Minneiska and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 60 inches; stratified sand to loamy fine sand to loam

519--Klossner Muck, Depressional, Calcareous, 0 To 1 Percent Slopes

Component Description

Klossner and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 16.9 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 22 inches; muck
H2--22 to 34 inches; mucky silty clay loam
H3--34 to 47 inches; silty clay loam
H4--47 to 60 inches;

525--Muskego Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Muskego and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 16.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 10 inches; muck
H2--10 to 20 inches; muck
H3--20 to 60 inches; mucky silt loam

539--Klossner Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Klossner and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 16.7 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 20 inches; muck
H2--20 to 29 inches; mucky silty clay loam
H3--29 to 60 inches; silty clay loam

574--Du Page Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Du page and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Occasional April May June
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

575--Nishna Silty Clay, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Nishna and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.3 inches
Content of organic matter in the upper 10 inches: 4.7 percent
Typical profile:
H1--0 to 9 inches; silty clay
H2--9 to 60 inches; silty clay

595F--Swanlake Loam, 18 To 50 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 85 percent of the unit
Slope range: 18 to 50 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 43 inches; loam
H3--43 to 60 inches; loam

610--Calco Silty Clay Loam, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Calco and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 5.4 percent
Typical profile:
H1--0 to 7 inches; silty clay loam
H2--7 to 44 inches; silty clay loam
H3--44 to 60 inches; silty clay loam

770C2--Ves-Terril Complex, 6 To 15 Percent Slopes, Eroded

Component Description

Ves and similar soils
Extent: 60 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 20 inches; loam
H3--20 to 28 inches; loam
H4--28 to 60 inches; loam

Terril and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 36 inches; loam
H2--36 to 45 inches; loam
H3--45 to 60 inches; loam

810--Coriff-Fieldon Complex, 0 To 2 Percent Slopes

Component Description

Coriff and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 24 inches; sandy loam
H3--24 to 33 inches; loamy fine sand
H4--33 to 60 inches; loam

Fieldon and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):

3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; fine sandy loam
H2--17 to 27 inches; fine sandy loam
H3--27 to 60 inches; stratified fine sand to fine sandy loam

817--Canisteo-Seaforth Complex, 0 To 3 Percent Slopes

Component Description

Canisteo and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; silty clay loam
H2--20 to 31 inches; clay loam
H3--31 to 38 inches; clay loam
H4--38 to 60 inches; loam

Seaforth and similar soils
Extent: 30 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 14 inches; loam
H3--14 to 60 inches; loam

875C--Hawick-Estherville Complex, 6 To 12 Percent Slopes

Component Description

Hawick and similar soils
Extent: 60 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
H1--0 to 8 inches; gravelly sandy loam
H2--8 to 12 inches; gravelly loamy coarse sand
H3--12 to 60 inches; gravelly coarse sand

Estherville and similar soils

Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly coarse sand

887B--Clarion-Swanlake Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 31 inches; loam
H3--31 to 60 inches; loam

Swanlake and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 14 inches; loam
H3--14 to 60 inches; loam

899--Harps-Okoboji, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Harps and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 13 inches; clay loam
H2--13 to 17 inches; clay loam
H3--17 to 60 inches; loam

Okoboji and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 8 inches; silty clay loam
H2--8 to 28 inches; silty clay loam
H3--28 to 60 inches; silty clay loam

920B--Clarion-Storden-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 26 inches; loam
H3--26 to 60 inches; loam

Storden and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 36 inches; loam
H3--36 to 60 inches; loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.9 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; gravelly sandy loam
H2--10 to 15 inches; gravelly loamy coarse sand
H3--15 to 60 inches; gravelly coarse sand

927--Harps-Seaforth-Okoboji, Depressional, Complex, 0 To 3 Percent Slopes

Component Description

Harps and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 33 inches; clay loam
H3--33 to 60 inches; loam

Seaforth and similar soils
Extent: 30 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 24 inches; loam
H3--24 to 60 inches; loam

Okoboji and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 9 inches; silty clay loam

H2--9 to 41 inches; silty clay loam
H3--41 to 60 inches; silty clay loam

954C2--Ves-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Ves and similar soils
Extent: 65 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 22 inches; loam
H3--22 to 38 inches; loam
H4--38 to 60 inches; loam

Storden and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 20 inches; loam
H3--20 to 60 inches; loam

956--Canisteo-Glencoe, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Canisteo and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 21 inches; clay loam
H3--21 to 28 inches; clay loam
H4--28 to 60 inches; loam

Glencoe and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 32 inches; clay loam
H3--32 to 42 inches; loam
H4--42 to 60 inches; loam

960D2--Storden-Omsrud Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 65 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 18 inches; loam
H3--18 to 60 inches; loam

Omsrud and similar soils
Extent: 20 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 36 inches; loam
H3--36 to 60 inches; loam

960F--Storden-Omsrud Complex, 18 To 50 Percent Slopes

Component Description

Storden and similar soils
Extent: 70 percent of the unit
Slope range: 18 to 50 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 15 inches; loam
H3--15 to 60 inches; loam

Omsrud and similar soils
Extent: 15 percent of the unit

Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 16 inches; loam
H3--16 to 60 inches; loam

978--Cordova-Rolfe, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Cordova and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 22 inches; clay loam
H2--22 to 39 inches; clay loam
H3--39 to 60 inches; loam

Rolfe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 21 inches; silt loam
H2--21 to 40 inches; silty clay
H3--40 to 60 inches; clay loam

999C2--Ves-Storden-Hawick Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 32 inches; loam
H3--32 to 60 inches; loam

Ves and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 25 inches; loam
H3--25 to 40 inches; loam
H4--40 to 60 inches; loam

Delft
Extent: 15 percent of the unit
Geomorphic description:
Drainageway

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.9 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; gravelly sandy loam
H2--7 to 15 inches; gravelly loamy coarse sand
H3--15 to 60 inches; gravelly coarse sand

1030--Pits, Gravel-Udipsamments Complex

Component Description

Pits and similar soils
Extent: 45 percent of the unit
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

Udipsamments
Extent: 45 percent of the unit
Slope range: 0 to 30 percent
Surface layer texture: Sand
Drainage class: Excessively drained
Flooding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.2 percent
Typical profile:
H1--0 to 14 inches; sand
H2--14 to 60 inches; sand
H3--60 to 80 inches; coarse sand

1080--Klossner, Okoboji, And Glencoe Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Glencoe and similar soils

Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 26 inches; silty clay loam
H2--26 to 30 inches; clay loam
H3--30 to 60 inches; loam

Klossner and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 17.8 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 32 inches; muck
H2--32 to 60 inches; clay loam

Okoboji and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding does not occur (months):
All year
Ponding is deepest (depth, months):
Same as for shallowest
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
H1--0 to 17 inches; mucky silty clay loam
H2--17 to 48 inches; silty clay loam
H3--48 to 60 inches; silty clay loam

1100--Nicollet Silty Clay Loam, 1 To 3 Percent Slopes

Component Description

Nicollet and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):

More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; silty clay loam
H2--15 to 20 inches; clay loam
H3--20 to 60 inches; loam

1101--Webster Silty Clay Loam, Moderately Fine Substratum, 0 To 2 Percent Slopes

Component Description

Webster and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; silty clay loam
H2--17 to 24 inches; clay loam
H3--24 to 60 inches; loam

1159B--Strout-Arkton Complex, 2 To 6 Percent Slopes

Component Description

Strout and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; clay
H2--10 to 23 inches; clay loam
H3--23 to 60 inches; clay loam

Arkton and similar soils
Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; clay loam

H2--9 to 25 inches; clay loam
H3--25 to 60 inches; clay loam

1162A--Kandiyohi Clay, 0 To 2 Percent Slopes

Component Description

Kandiyohi and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; clay
H2--9 to 21 inches; clay
H3--21 to 46 inches; clay loam
H4--46 to 60 inches; clay loam

1169--Corvuso-Lura, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Corvuso and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 28 inches; clay
H3--28 to 60 inches; clay loam

Lura and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 7.6 percent
Typical profile:
H1--0 to 9 inches; silty clay
H2--9 to 43 inches; silty clay
H3--43 to 60 inches; silty clay

1193--Cosmos Silty Clay, 0 To 2 Percent Slopes

Component Description

Cosmos and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; silty clay
H2--23 to 38 inches; clay
H3--38 to 60 inches; silty clay

1205--Leen-Okoboji, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Leen and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.7 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 27 inches; silt loam
H3--27 to 36 inches; silt loam
H4--36 to 60 inches; loam

Okoboji and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 32 inches; silty clay loam
H2--32 to 38 inches; silty clay loam
H3--38 to 60 inches; silty clay loam

1242F--Swanlake-Terril Complex, 18 To 50 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 50 percent of the unit
Slope range: 18 to 50 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 15 inches; loam
H3--15 to 60 inches; loam

Terril and similar soils
Extent: 40 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 32 inches; loam
H2--32 to 40 inches; loam
H3--40 to 60 inches; loam

1261B--Bechyn Loam, 2 To 6 Percent Slopes

Component Description

Bechyn and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 8 to 20 inches
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 18 inches; loam
H3--18 to 60 inches; bedrock

Cedarrock
Extent: 15 percent of the unit
Geomorphic description:
Flood plain

1262--Seaforth Silt Loam, 1 To 3 Percent Slopes

Component Description

Seaforth and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None

Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 16 inches; silt loam
H2--16 to 44 inches; loam
H3--44 to 60 inches; loam

1267--Cedarrock Silty Clay Loam, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Cedarrock and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Bedrock (lithic): 24 to 40 inches
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 28 inches; silty clay loam
H2--28 to 34 inches; loam
H3--34 to 60 inches;

1268--Hanlon Loam, 1 To 3 Percent Slopes, Rarely Flooded

Component Description

Hanlon and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 48 inches; fine sandy loam
H3--48 to 60 inches; fine sandy loam

1269--Lowlein Silt Loam, 0 To 2 Percent Slopes

Component Description

Lowlein and similar soils
Extent: 85 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained

Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 32 inches; fine sandy loam
H3--32 to 60 inches; loam

1270D--Bechyn-Rock Outcrop Complex, 0 To 40 Percent Slopes

Component Description

Bechyn and similar soils
Extent: 65 percent of the unit
Slope range: 0 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 8 to 20 inches
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.1 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 15 inches; loam
H3--15 to 60 inches; bedrock

Outcrop and similar soils
Extent: 25 percent of the unit
Slope range: 0 to 40 percent
Surface layer texture: Bedrock
Depth to restrictive feature:
Bedrock (lithic): 0 to 4 inches
Flooding: None
Ponding: None
Typical profile:
H1--0 to 60 inches; bedrock

1285--Chetomba Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Chetomba and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; silty clay loam
H2--23 to 31 inches; silty clay loam
H3--31 to 43 inches; silt loam
H4--43 to 60 inches; loam

1286--Prinsburg Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Prinsburg and similar soils

Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 19 inches; silty clay loam
H2--19 to 36 inches; silt loam
H3--36 to 46 inches; silt loam
H4--46 to 60 inches; clay loam

1287--Calco Silty Clay Loam, Ponded, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Calco and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 5.4 percent
Typical profile:
H1--0 to 7 inches; silty clay loam
H2--7 to 41 inches; silty clay loam
H3--41 to 60 inches; silty clay loam

1355B--Amiret-Swanlake Complex, 2 To 6 Percent Slopes

Component Description

Amiret and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 26 inches; loam
H3--26 to 35 inches; loam
H4--35 to 60 inches; loam

Swanlake and similar soils

Extent: 20 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 32 inches; loam
H3--32 to 60 inches; loam

1356--Water, Miscellaneous

Component Description

Water
Extent: 100 percent of the unit

1369A--Crooksford Silt Loam, 1 To 3 Percent Slopes

Component Description

Crooksford and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 29 inches; silt loam
H3--29 to 36 inches; loam
H4--36 to 60 inches; loam

1369B--Crooksford Silt Loam, 3 To 5 Percent Slopes

Component Description

Crooksford and similar soils
Extent: 85 percent of the unit
Slope range: 3 to 5 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 27 inches; silt loam
H3--27 to 43 inches; loam
H4--43 to 60 inches; loam

1370B--Amiret Loam, 2 To 5 Percent Slopes

Component Description

Amiret and similar soils
Extent: 85 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 20 inches; loam
H3--20 to 30 inches; loam
H4--30 to 60 inches; loam

1371B--Crooksford-Swanlake Complex, 3 To 6 Percent Slopes

Component Description

Crooksford and similar soils
Extent: 60 percent of the unit
Slope range: 3 to 5 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 25 inches; silt loam
H3--25 to 35 inches; loam
H4--35 to 60 inches; loam

Swanlake and similar soils
Extent: 30 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 46 inches; loam
H3--46 to 60 inches; loam

1373C--Omsrud-Storden-Hawick Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Omsrud and similar soils
Extent: 45 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year

Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 22 inches; loam
H3--22 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 23 inches; loam
H3--23 to 60 inches; loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; gravelly sandy loam
H2--9 to 28 inches; gravelly loamy coarse sand
H3--28 to 60 inches; gravelly coarse sand

1374--Havelock Clay Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Havelock and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 23 inches; clay loam
H2--23 to 35 inches; clay loam
H3--35 to 60 inches; loam

1375D--Storden-Ves Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 24 inches; loam
H3--24 to 60 inches; loam

Ves and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 22 inches; loam
H3--22 to 44 inches; loam
H4--44 to 60 inches; loam

1376C--Omsrud-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Omsrud and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 29 inches; loam
H3--29 to 60 inches; loam

Storden and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 55 inches; loam
H3--55 to 60 inches; loam

1382--Louris Silt Loam, 1 To 3 Percent Slopes

Component Description

Louris and similar soils
Extent: 85 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 20 inches; silt loam
H3--20 to 31 inches; silt loam
H4--31 to 60 inches; loam

1386B--Amiret-Swanlake-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Amiret and similar soils
Extent: 40 percent of the unit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 20 inches; loam
H3--20 to 50 inches; loam
H4--50 to 60 inches; loam

Swanlake and similar soils
Extent: 30 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 15 inches; loam
H3--15 to 60 inches; loam

Hawick and similar soils
Extent: 15 percent of the unit
Slope range: 2 to 6 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 8 inches;
H2--8 to 13 inches;
H3--13 to 60 inches;

1388B--Terril Loam, Moderately Wet, 2 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 27 inches; loam
H2--27 to 40 inches; loam
H3--40 to 60 inches; loam

1389--Havelock Silt Loam, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Havelock and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 30 inches; silt loam
H2--30 to 40 inches; clay loam
H3--40 to 60 inches; loam

1390--Leen Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Leen and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; silty clay loam
H2--15 to 25 inches; silt loam

H3--25 to 38 inches; silt loam
H4--38 to 60 inches; loam

1392B--Grogan Silt Loam, Moderately Wet, 1 To 4 Percent Slopes

Component Description

Grogan and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 38 inches; silt loam
H3--38 to 60 inches; stratified loamy very fine sand to silt loam

1802--Calcousta-Okoboji Complex, Depressional, 0 To 1 Percent Slopes

Component Description

Calcousta and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.4 inches
Content of organic matter in the upper 10 inches: 9.0 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 24 inches; silty clay loam
H3--24 to 60 inches; silty clay loam

Okoboji and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 11.8 percent
Typical profile:
H1--0 to 6 inches;

H2--6 to 32 inches;
H3--32 to 60 inches;

1833--Coland Clay Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Coland and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 54 inches; clay loam
H3--54 to 60 inches; loam

1834--Coland Clay Loam, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Coland and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 12 inches; clay loam
H2--12 to 28 inches; clay loam
H3--28 to 60 inches; loam

1845A--Estherville Loam, 0 To 2 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent

Typical profile:
H1--0 to 12 inches; loam
H2--12 to 17 inches; sandy loam
H3--17 to 60 inches; gravelly coarse sand

1845B--Estherville Loam, 2 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 13 inches; sandy loam
H3--13 to 60 inches; gravelly coarse sand

1900--Okoboji-Canisteo Complex, Depressional, 0 To 1 Percent Slopes

Component Description

Okoboji and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
H1--0 to 12 inches; mucky silty clay loam
H2--12 to 30 inches; silty clay loam
H3--30 to 60 inches; silty clay loam

Canisteo and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 19 inches; silty clay loam
H2--19 to 23 inches; clay loam
H3--23 to 39 inches; clay loam
H4--39 to 60 inches; loam

1917--Nishna Silty Clay Loam, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Nishna and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 21 inches; silty clay loam
H2--21 to 60 inches; silty clay

1958--Danube Silty Clay, 0 To 2 Percent Slopes

Component Description

Danube and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 19 inches; silty clay
H2--19 to 31 inches; silt loam
H3--31 to 35 inches; sandy loam
H4--35 to 60 inches; loamy sand

1999--Minneiska-Rushriver Complex, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Minneiska and similar soils
Extent: 55 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 60 inches; stratified silt loam to sand

Rushriver and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 46 inches; loam
H2--46 to 60 inches; stratified silt loam to coarse sand

W--Water

Component Description

Water
Extent: 100 percent of the unit

Rice County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Rock County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Soil Descriptions - Non Technical

47--Colvin Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Colvin and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on lake plain
Swale on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March August December
Ponding is deepest (depth, months):
0.3 foot April May June July September
October November
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap--0 to 11 inches; silty clay loam
Bkg1-3--11 to 41 inches; silty clay loam
Cg1..Cg3--41 to 80 inches; silt loam

48B--Hiwood Fine Sand, 1 To 6 Percent Slopes

Component Description

Hiwood and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 1 to 6 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A,E--0 to 3 inches; fine sand
Bw1,Bw2--3 to 22 inches; fine sand
C1..C4--22 to 80 inches; fine sand

52--Augsburg Loam, 0 To 2 Percent Slopes

Component Description

Augsburg and similar soils
Extent: 85 percent of the unit

Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June September October
November
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
Ap--0 to 9 inches; loam
Bkg..Bg2--9 to 33 inches; silt loam
2Cg--33 to 80 inches; clay

59--Grimstad Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Grimstad and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
Bk..C3--10 to 30 inches; fine sand
2C4..2C5--30 to 80 inches; fine sandy loam

64--Ulen Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Ulen and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 3.5 percent

Typical profile:
Ap--0 to 10 inches; fine sandy loam
Bk--10 to 16 inches; loamy fine sand
C1..C4--16 to 67 inches; fine sand
2Cg5--67 to 80 inches; very fine sandy loam

65--Foxhome Sandy Loam, 0 To 3 Percent Slopes

Component Description

Foxhome and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bw1--10 to 15 inches; loamy fine sand
2Bw2--15 to 23 inches; very gravelly coarse sand
3C1..3C3--23 to 80 inches; loam

67--Bearden Silt Loam, 0 To 2 Percent Slopes

Component Description

Bearden and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.3 percent
Typical profile:
Ap--0 to 7 inches; silt loam
ABk..Bk2--7 to 32 inches;
C1..C4--32 to 80 inches;

Additional Components

Colvin and similar soils: 15 percent of the unit

77--Garnes Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Garnes and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits and till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap,E--0 to 9 inches; fine sandy loam
Bt--9 to 14 inches; clay loam
Bk1..C--14 to 80 inches; fine sandy loam

111--Hangaard Sandy Loam, 0 To 2 Percent Slopes

Component Description

Hangaard and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on beach plain
Flat on beach plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.3 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding does not occur (months):
January February March July August September October
November December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 2.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap--0 to 12 inches; sandy loam
Cg1..Cg5--12 to 80 inches; stratified gravelly coarse sand

116--Redby Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Redby and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 3 inches; loamy fine sand
E..Bw2--3 to 28 inches; fine sand
Cg1..Cg3--28 to 80 inches; fine sand

117--Cormant Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Cormant and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding does not occur (months):
January February March July August September November
December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 3.9 percent
Typical profile:
Ap--0 to 6 inches; loamy fine sand
Cg1..Cg7--6 to 80 inches; fine sand

133--Dalbo Loam, 0 To 3 Percent Slopes

Component Description

Dalbo and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap..E--0 to 15 inches; loam
Bt--15 to 23 inches; clay
Bk..C2--23 to 80 inches; silty clay

145--Enstrom Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Enstrom and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):

2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 6 inches; loamy fine sand
Bw1,Bw2--6 to 29 inches; fine sand
2C--29 to 80 inches; loam

147--Spooner Very Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Spooner and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on lake plain
Swale on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June September October
November
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
Ap--0 to 6 inches; very fine sandy loam
E--6 to 15 inches; loamy very fine sand
Btg--15 to 22 inches; loam
Cg1,Cg2--22 to 60 inches; silt loam

158B--Zimmerman Fine Sand, 1 To 6 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach ridge
Position on landform:
Shoulder
Summit
Slope range: 1 to 6 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Beach deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A,E--0 to 6 inches; fine sand
Bw1..C--6 to 80 inches; fine sand

167B--Baudette Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Baudette and similar soils

Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
Ap--0 to 8 inches; fine sandy loam
E--8 to 10 inches; very fine sandy loam
Bt1..Bt3--10 to 30 inches; silty clay loam
BCk1..C--30 to 80 inches; silt loam

187--Haug Muck, 0 To 1 Percent Slopes

Component Description

Haug and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September
Ponding is deepest (depth, months):
0.5 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 10 inches; muck
A--10 to 16 inches; loam
Bg,Cg--16 to 80 inches; loam

191--Epoufette Loamy Fine Sand, Map 22-30, 0 To 2 Percent Slopes

Component Description

Epoufette and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flat on beach plain
Swale on beach plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.3 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding does not occur (months):

January February March July August September November
December
        Ponding is deepest (depth, months):
0.3 foot   April May
        Available water capacity to a depth of 60 inches: 2.8 inches
        Content of organic matter in the upper 10 inches: 4.0 percent
        Typical profile:
Ap,Eg--0 to 10 inches; loamy fine sand
Btg--10 to 20 inches; sandy loam
2Cg1-3--20 to 60 inches; stratified gravelly sand

202--Meehan Loamy Sand, Map 22-30, 0 To 2 Percent Slopes

  Component Description

     Meehan and similar soils
        Extent: 85 percent of the unit
        Geomorphic description:
Rise on lake plain
Flat on lake plain
        Slope range: 0 to 2 percent
        Surface layer texture: Loamy sand
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Somewhat poorly drained
        Parent material:
Glaciolacustrine deposits
        Flooding: None
        Wet soil moisture status is highest (depth, months):
1.5 feet   April
        Wet soil moisture status is lowest (depth, months):
More than 6.7 feet   August
        Ponding: None
        Available water capacity to a depth of 60 inches: 4.4 inches
        Content of organic matter in the upper 10 inches: 1.4 percent
        Typical profile:
A,E--0 to 8 inches; loamy sand
Bw1,Bw2--8 to 31 inches; sand
C1..Cg4--31 to 80 inches; sand

205--Karlstad Loamy Sand, 0 To 3 Percent Slopes

  Component Description

     Karlstad and similar soils
        Extent: 85 percent of the unit
        Geomorphic description:
Beach ridge
        Position on landform:
Backslope
        Slope range: 0 to 3 percent
        Surface layer texture: Loamy sand
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Moderately well drained
        Parent material:
Beach deposits
        Flooding: None
        Wet soil moisture status is highest (depth, months):
3.0 feet   April
        Wet soil moisture status is lowest (depth, months):
More than 6.7 feet   July August
        Ponding: None
        Available water capacity to a depth of 60 inches: 3.2 inches
        Content of organic matter in the upper 10 inches: 2.1 percent
        Typical profile:
Ap,E--0 to 7 inches; loamy sand
Bt1--7 to 10 inches; sandy loam
2Bt2--10 to 14 inches; gravelly sandy loam
2C1,2C2--14 to 80 inches; stratified gravelly coarse sand to
loamy fine sand

242B--Marquette Loamy Sand, 1 To 8 Percent Slopes

  Component Description

     Marquette and similar soils

Extent: 85 percent of the unit
Geomorphic description:
Beach ridge
Position on landform:
Shoulder
Summit
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Beach deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
A--0 to 7 inches; loamy sand
Bt1,Bt2--7 to 16 inches;
C1..C3--16 to 80 inches;

280--Pelan Sandy Loam, 0 To 3 Percent Slopes

Component Description

Pelan and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap--0 to 6 inches; sandy loam
Bt1..Bt2--6 to 12 inches; very gravelly sandy loam
Bw1..Bw2--12 to 24 inches; very gravelly coarse sand
2Bk--24 to 60 inches; loam

379--Percy Loam, 0 To 2 Percent Slopes, Very Cobbly

Component Description

Percy, very cobbly and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June September October
November

Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 5.4 percent
Typical profile:
Ap--0 to 8 inches; loam
Bkg1-2--8 to 23 inches; loam
Cg1-2--23 to 80 inches; loam

383--Percy Loam, 0 To 2 Percent Slopes

Component Description

Percy and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June September October
November
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap--0 to 10 inches; loam
Bkg1-2--10 to 25 inches; loam
Cg1-3--25 to 80 inches; loam

384--Percy Mucky Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Percy, depressional and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September October
Ponding is deepest (depth, months):
0.5 foot January February March April May
June November December
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap--0 to 8 inches; mucky loam
Bkg1-2--8 to 27 inches; loam
Cg1-2--27 to 80 inches; loam

387--Roliss Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Roliss, depressional and similar soils

Extent: 85 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September October
Ponding is deepest (depth, months):
0.5 foot January February March April May
June November December
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
A--0 to 8 inches; loam
Bg--8 to 13 inches; silty clay loam
Cg1-3--13 to 80 inches; loam

404--Chilgren Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Chilgren and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June September October
November
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
A--0 to 5 inches; fine sandy loam
E--5 to 9 inches; fine sandy loam
Btg--9 to 16 inches; loam
Bkg,Cg--16 to 80 inches; loam

412--Mavie Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Mavie and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.1 feet August
Ponding does not occur (months):
January February March July August September November
December
Ponding is deepest (depth, months):
0.3 foot April May June October
Available water capacity to a depth of 60 inches: 7.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap--0 to 12 inches; fine sandy loam
Bkg--12 to 18 inches; fine sandy loam
2Cg1-2--18 to 39 inches; very gravelly sand
3Cg3--39 to 80 inches; loam

432--Strandquist Loam, 0 To 2 Percent Slopes

Component Description

Strandquist and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.1 feet August
Ponding does not occur (months):
January February March July August September November
December
Ponding is deepest (depth, months):
0.3 foot April May June October
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 3.6 percent
Typical profile:
Ap--0 to 8 inches; loam
2Bg1-2--8 to 35 inches; very gravelly sand
3Cg--35 to 80 inches; loam

433--Syrene Mucky Sandy Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Syrene, depressional and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression on beach plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
3.0 feet February August
Ponding is shallowest (depth, months):
0.3 foot July August September October
Ponding is deepest (depth, months):
0.5 foot January February March April May
June November December
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:

Ap--0 to 12 inches; mucky sandy loam
Bkg1--12 to 18 inches; sandy loam
2Cg1-6--18 to 80 inches; stratified gravelly coarse sand to loamy
fine sand

435--Syrene Sandy Loam, 0 To 2 Percent Slopes

Component Description

Syrene and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on beach plain
Flat on beach plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.3 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding does not occur (months):
January February March July August September October
November December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap--0 to 11 inches; sandy loam
Bkg1--11 to 19 inches; sandy loam
2Bkg.2Cg--19 to 80 inches; stratified gravelly coarse sand to
loamy fine sand

439--Strathcona Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Strathcona and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.1 feet August
Ponding does not occur (months):
January February March July August September December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
Bkg--10 to 17 inches; fine sandy loam
Cg1--17 to 28 inches; fine sand
2Cg2-3--28 to 80 inches; loam

481--Kratka Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Kratka and similar soils

Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.1 feet August
Ponding does not occur (months):
January February March July August September December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 8 inches; fine sandy loam
ABg,Bg--8 to 22 inches; loamy fine sand
2Bkg-2Cg--22 to 80 inches; loam

482--Grygla Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Grygla and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits and till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.1 feet August
Ponding does not occur (months):
January February March July August September December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
A--0 to 6 inches; loamy fine sand
Bg--6 to 26 inches; fine sand
2BCkg2Cg--26 to 80 inches; loam

532--Sago Muck, 0 To 1 Percent Slopes

Component Description

Sago and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):

2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September
Ponding is deepest (depth, months):
0.5 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 13.4 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
Oa--0 to 14 inches; muck
A..Cg3--14 to 80 inches; stratified fine sand to silt loam

534--Mooselake Mucky Peat, 0 To 1 Percent Slopes

Component Description

Mooselake and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding is shallowest (depth, months):
0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 26.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oe1--0 to 16 inches; mucky peat
Oe2..Oe4--16 to 80 inches; mucky peat

540--Seelyeville Muck, 0 To 1 Percent Slopes

Component Description

Seelyeville and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding is shallowest (depth, months):
0.3 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot March April May June
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 12 inches; muck
Oa2-Oa4--12 to 80 inches; muck

541--Rifle Mucky Peat, Map 18-22, 0 To 1 Percent Slopes

Component Description

Rifle and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding is shallowest (depth, months):
0.3 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot March April May June
Available water capacity to a depth of 60 inches: 31.7 inches
Content of organic matter in the upper 10 inches: 82.0 percent
Typical profile:
Oep--0 to 8 inches; mucky peat
Oe1..Oe4--8 to 80 inches; mucky peat

543--Markey Muck, Map 18-22, 0 To 1 Percent Slopes

Component Description

Markey and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
2.1 feet February
Ponding is shallowest (depth, months):
0.3 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot March April May June
Available water capacity to a depth of 60 inches: 17.9 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa1..Oa5--0 to 42 inches; muck
Cg--42 to 80 inches; fine sand

544--Cathro Muck, Map 18-22, 0 To 1 Percent Slopes

Component Description

Cathro and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits or till
Flooding: None

Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
2.1 feet February
Ponding is shallowest (depth, months):
0.3 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot March April May June
Available water capacity to a depth of 60 inches: 19.8 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
Oa1--0 to 8 inches; muck
Oa2,Oa3--8 to 40 inches; muck
A,Cg--40 to 80 inches; loam

546--Lupton Muck, Map 22-30, 0 To 1 Percent Slopes

Component Description

Lupton and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding is shallowest (depth, months):
0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 80.0 percent
Typical profile:
Oa1--0 to 16 inches; muck
Oa2..Oa4--16 to 80 inches; muck

547--Deerwood Muck, 0 To 1 Percent Slopes

Component Description

Deerwood and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September
Ponding is deepest (depth, months):
0.5 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oap--0 to 14 inches; muck
A--14 to 16 inches; fine sandy loam

Cg1..Cg3--16 to 80 inches; fine sand

550--Dora Muck, 0 To 1 Percent Slopes

Component Description

Dora and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
2.1 feet February
Ponding is shallowest (depth, months):
0.3 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot March April May June
Available water capacity to a depth of 60 inches: 18.3 inches
Content of organic matter in the upper 10 inches: 55.5 percent
Typical profile:
Oa1--0 to 5 inches; muck
Oa2,Oa3--5 to 31 inches; muck
A..Cg3--31 to 80 inches; silty clay

561--Bullwinkle Muck, 0 To 1 Percent Slopes

Component Description

Bullwinkle and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits or till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 22.7 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
Oa1--0 to 16 inches; muck
Oa2-Oa3--16 to 48 inches; muck
A-Cg--48 to 80 inches; silt loam

563--Northwood Muck, 0 To 1 Percent Slopes

Component Description

Northwood and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits or till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September
Ponding is deepest (depth, months):
0.5 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 67.5 percent
Typical profile:
Oa--0 to 11 inches; muck
A--11 to 16 inches; fine sandy loam
Bg--16 to 25 inches; fine sand
2Cg1-3--25 to 80 inches; loam

565--Eckvoll Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Eckvoll and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A--0 to 6 inches; loamy fine sand
E1,E2--6 to 21 inches; fine sand
2Bt--21 to 26 inches; sandy clay loam
2Bk,2C--26 to 80 inches; loam

568--Zippel Very Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Zippel and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June
Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 10 inches; very fine sandy loam
Bg--10 to 16 inches; very fine sandy loam
Cg1..Cg3--16 to 80 inches; stratified silt loam to very fine sand

569--Wabanica Silt Loam, 0 To 2 Percent Slopes

Component Description

Wabanica and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March August December
Ponding is deepest (depth, months):
0.3 foot April May June July September
October November
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; silt loam
Bg--8 to 19 inches; silt loam
Cg1..Cg3--19 to 80 inches; silt loam

570--Faunce Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Faunce and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach ridge
Position on landform:
Shoulder
Summit
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Beach deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
Ap--0 to 2 inches; loamy fine sand
E1,E2--2 to 14 inches; loamy sand
E&Bt--14 to 24 inches; gravelly loamy coarse sand
C1..C3--24 to 80 inches; stratified coarse sand to gravelly sand

581--Percy Fine Sandy Loam, 0 To 1 Percent Slopes

Component Description

Percy and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain

Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June September October
November
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap--0 to 11 inches; fine sandy loam
2Bkg1--11 to 15 inches; loam
2Bkg2.2C--15 to 60 inches; loam

582--Roliss Loam, 0 To 2 Percent Slopes

Component Description

Roliss and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June September October
November
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap, A--0 to 14 inches; loam
Bg--14 to 20 inches; clay loam
Cg1-Cg3--20 to 80 inches; loam

583--Nereson Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Nereson and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None

Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam
Bt--7 to 11 inches; sandy loam
2Bk1-2--11 to 29 inches; loam
2C1,2C2--29 to 80 inches; loam

627--Tawas Muck, Map 22-30, 0 To 1 Percent Slopes

Component Description

Tawas and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 50.0 percent
Typical profile:
Oa1--0 to 10 inches; muck
Oa2--10 to 27 inches; muck
Cg1..Cg4--27 to 80 inches; sand

630--Wildwood Muck, 0 To 1 Percent Slopes

Component Description

Wildwood and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September
Ponding is deepest (depth, months):
0.5 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1,Oa2--0 to 12 inches; muck
A,Bg--12 to 33 inches; clay
Cg1,Cg2--33 to 80 inches; clay

643--Huot Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Huot and similar soils

Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,Ak--0 to 14 inches; fine sandy loam
Bk--14 to 26 inches; loamy fine sand
C1--26 to 34 inches; fine sand
2C2,2C3--34 to 80 inches; clay

644--Boash Clay Loam, 0 To 2 Percent Slopes

Component Description

Boash and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding does not occur (months):
January February March December
Ponding is deepest (depth, months):
0.3 foot April May June November
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 4.3 percent
Typical profile:
Ap--0 to 9 inches; clay loam
Bg1,Bg2--9 to 29 inches; clay
2BCkg,2C--29 to 80 inches; silt loam

645--Espelie Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Espelie and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):

January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
Bg1,Bg2--10 to 27 inches; fine sand
2Cg--27 to 80 inches; clay

651--Thiefriver Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Thiefriver and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
Bkg--10 to 16 inches;
Cg1,Cg2--16 to 35 inches;
2Cg3--35 to 80 inches;

708--Rushlake Loamy Sand, 0 To 3 Percent Slopes

Component Description

Rushlake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on beach plain
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 8 inches; loamy sand
C1..C6--8 to 80 inches; gravelly sand

712--Rosewood Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Rosewood and similar soils
Extent: 85 percent of the unit
Geomorphic description:

Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding does not occur (months):
January February March July August September November
December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap--0 to 11 inches; fine sandy loam
Bkg--11 to 19 inches; fine sandy loam
Cg1..Cg3--19 to 65 inches; fine sand
Cg4,Cg5--65 to 80 inches; fine sand

721B--Corliss Loamy Sand, 1 To 6 Percent Slopes

Component Description

Corliss and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach ridge
Position on landform:
Shoulder
Summit
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Beach deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.9 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy sand
Bw..C4--8 to 80 inches; stratified very gravelly sand to sand

733--Berner Muck, 0 To 1 Percent Slopes

Component Description

Berner and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits or till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
2.1 feet February
Ponding is shallowest (depth, months):
0.3 foot January February July August
September October November

December
Ponding is deepest (depth, months):
0.5 foot March April May June
Available water capacity to a depth of 60 inches: 14.4 inches
Content of organic matter in the upper 10 inches: 87.5 percent
Typical profile:
Oa1,Oa2--0 to 23 inches; muck
A,Cg1--23 to 41 inches; fine sand
2Cg2--41 to 80 inches; loam

737--Mahkonce Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Mahkonce and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 3 inches; fine sandy loam
E--3 to 5 inches; fine sandy loam
Bt--5 to 16 inches; clay
Btk--16 to 23 inches; silty clay loam
Bk,C--23 to 80 inches; silty clay loam

755--Woodslake Clay, 0 To 1 Percent Slopes

Component Description

Woodslake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
Ap--0 to 8 inches; clay
Bg1--8 to 15 inches; clay
Bg2,Cg1--15 to 36 inches; clay
Cg2,Cg3--36 to 80 inches; clay

767--Auganaush Loam, 0 To 2 Percent Slopes

Component Description

Auganaush and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain

Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
3.3 feet August
Ponding does not occur (months):
January February March December
Ponding is deepest (depth, months):
0.3 foot April May June November
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
A--0 to 5 inches; loam
E--5 to 7 inches; fine sandy loam
Btg--7 to 18 inches; clay
Bkg1-2--18 to 58 inches; silty clay loam
58 to 80 inches; loam

794--Clearriver Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Clearriver and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach ridge
Position on landform:
Shoulder
Backslope
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
Ap--0 to 2 inches; loamy fine sand
E1,E2--2 to 21 inches; loamy sand
E&Bt..C3--21 to 80 inches; stratified fine sand to gravelly coarse sand

1002--Fluvaquents, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Fluvaquents, frequently flooded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on flood plain
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February December
Flooding is most likely (frequency, months):
Very frequentApril May

Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding is shallowest (depth, months):
0.5 foot January February March June July
August September October
November December
Ponding is deepest (depth, months):
0.7 foot April May
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 12 inches; fine sandy loam
Cg--12 to 80 inches; stratified loamy sand to silt loam

1030--Pits, Gravel-Udipsamments Complex, 1 To 50 Percent Slopes

Component Description

Pits, gravel
Extent: 75 percent of the unit
Slope range: 1 to 50 percent

Pits where sand and gravel have been removed.

Udipsamments and similar soils
Extent: 20 percent of the unit
Slope range: 1 to 50 percent
Surface layer texture: Sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 0.2 percent
Typical profile:
A--0 to 14 inches; sand
C1--14 to 60 inches; sand
C2--60 to 80 inches; gravelly coarse sand

1031--Seelyeville Muck, Ponded, 0 To 1 Percent Slopes

Component Description

Seelyeville, ponded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.0 foot all year
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 18 inches; muck
Oa2-Oa5--18 to 80 inches; muck

1067--Fluvaquents, Frequently Flooded-Hapludalfs Complex, 0 To 60 Percent Slopes

Component Description

Fluvaquents, frequently flooded and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Swale on flood plain
Flat on flood plain
Slope range: 0 to 2 percent

Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February December
Flooding is most likely (frequency, months):
Very frequentApril May
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding is shallowest (depth, months):
0.5 foot January February March June July
August September October
November December
Ponding is deepest (depth, months):
0.7 foot April May
Available water capacity to a depth of 60 inches: 7.0 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 11 inches; fine sandy loam
Cg--11 to 80 inches; stratified loamy sand to silt loam

Hapludalfs and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Escarpment
Position on landform:
Shoulder
Backslope
Slope range: 3 to 60 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits and till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
A--0 to 6 inches; fine sandy loam
E--6 to 8 inches; fine sandy loam
Bt1.Bt2--8 to 25 inches; clay loam
C1.C2--25 to 80 inches; silt loam

1133B--Skime Loamy Fine Sand, 0 To 4 Percent Slopes

Component Description

Skime and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 4 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
Ap--0 to 6 inches; loamy fine sand

E--6 to 17 inches; fine sand
Bt--17 to 22 inches; fine sandy loam
C1..C3--22 to 72 inches; fine sand
C4--72 to 80 inches; stratified fine sand to very fine sandy loam
to silt loam

1134--Borup-Glyndon Complex, 0 To 2 Percent Slopes

Component Description

Borup and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.7 percent
Typical profile:
Ap--0 to 9 inches; loam
Bkg1-2--9 to 34 inches; very fine sandy loam
Cg1-5--34 to 80 inches; very fine sandy loam

Glyndon and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
1.6 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 7 inches; very fine sandy loam
Bk1-C2--7 to 80 inches; very fine sandy loam

1144--Strathcona And Kratka Soils, Depressional, 0 To 1 Percent Slopes

Component Description

Strathcona, depressional and similar soils
Extent: 0 to 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):

At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding is shallowest (depth, months):
0.3 foot July August September October
Ponding is deepest (depth, months):
0.5 foot January February March April May
June November December
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 15.0 percent
Typical profile:
A--0 to 12 inches; mucky fine sandy loam
Bkg--12 to 18 inches; fine sandy loam
Cg1,Cg2--18 to 39 inches; fine sand
2Cg3-4--39 to 80 inches; loam

Kratka, depressional and similar soils
Extent: 0 to 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding is shallowest (depth, months):
0.3 foot July August September October
Ponding is deepest (depth, months):
0.5 foot January February March April May
June November December
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 13.9 percent
Typical profile:
Ap--0 to 9 inches; mucky fine sandy loam
Bg-Cg1--9 to 26 inches; loamy fine sand
2Cg3-4--26 to 80 inches; loam

1154--Sax Muck, 0 To 1 Percent Slopes

Component Description

Sax and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September
Ponding is deepest (depth, months):
0.5 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 14.5 inches
Content of organic matter in the upper 10 inches: 47.5 percent
Typical profile:
Oa--0 to 15 inches; muck
A--15 to 24 inches;
Bg--24 to 39 inches;
Cg1..Cg3--39 to 71 inches;
Cg4--71 to 80 inches;

1158--Skagen Loam, 0 To 3 Percent Slopes

Component Description

Skagen and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 6.1 percent
Typical profile:
Ap--0 to 9 inches; loam
Bk1,Bk2--9 to 19 inches; loam
C1,C2--19 to 80 inches; loam

1170--Skagen Loam, 0 To 3 Percent Slopes, Very Cobbly

Component Description

Skagen, very cobbly and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap--0 to 10 inches; loam
Bk1,Bk2--10 to 28 inches; loam
C1-3--28 to 80 inches; loam

1179B--Moranville Loamy Fine Sand, 0 To 4 Percent Slopes

Component Description

Moranville and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 4 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches

Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; fine sand
2Bt1-2--24 to 42 inches; silty clay loam
2C1..2C3--42 to 80 inches; very fine sandy loam

1181--Rosewood-Ulen Complex, 0 To 2 Percent Slopes

Component Description

Rosewood and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding does not occur (months):
January February March July August September November
December
Ponding is deepest (depth, months):
0.3 foot April May June October
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
Ap--0 to 8 inches; fine sandy loam
Bkg-Cg2--8 to 15 inches; fine sandy loam
Cg3--15 to 80 inches; fine sand

Ulen and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 5.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
Bk1-2--10 to 18 inches; loamy fine sand
C1-3--18 to 80 inches; fine sand

1182--Warroad Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Warroad and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained

Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.1 feet August
Ponding does not occur (months):
January February March July August September December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,A--0 to 11 inches; fine sandy loam
Bg..Cg2--11 to 26 inches; fine sand
2Cg3--26 to 80 inches; silt loam

1187--Dora Muck, Ponded, 0 To 1 Percent Slopes

Component Description

Dora, ponded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.0 foot all year
Available water capacity to a depth of 60 inches: 12.8 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1,Oa2--0 to 24 inches; muck
A--24 to 30 inches; mucky silt loam
Cg1..Cg3--30 to 80 inches; silty clay

1191--Sahkahtay Sandy Loam, 0 To 2 Percent Slopes

Component Description

Sahkahtay and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Swale on beach plain
Flat on beach plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.3 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding does not occur (months):
January February March July August September November
December
Ponding is deepest (depth, months):
0.3 foot April May
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
A--0 to 4 inches; sandy loam
Eg--4 to 8 inches; loamy sand
Btg--8 to 14 inches; sandy clay loam
2Cg1-4--14 to 80 inches; gravelly coarse sand

1206--Cormant-Redby Complex, 0 To 2 Percent Slopes

Component Description

Cormant and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
4.9 feet August
Ponding does not occur (months):
January February March July August September November
December
Ponding is deepest (depth, months):
0.3 foot April May June October
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
A--0 to 7 inches; loamy fine sand
Cg1..Cg3--7 to 80 inches; fine sand

Redby and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
A--0 to 4 inches; loamy fine sand
E..Bw2--4 to 30 inches; fine sand
Cg--30 to 80 inches; fine sand

1214--Mustinka Clay Loam, 0 To 1 Percent Slopes

Component Description

Mustinka and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding does not occur (months):
January February March December

Ponding is deepest (depth, months):
0.3 foot April May June November
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 7.1 percent
Typical profile:
Ap--0 to 9 inches; clay loam
Btg1,Btk--9 to 35 inches; silty clay
Cg1,Cg2--35 to 62 inches; silty clay loam
2Cg3--62 to 80 inches; silty clay loam

1274B--Redby-Hiwood-Leafriver Complex, 0 To 6 Percent Slopes

Component Description

Redby and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Flat on lake plain
Rise on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
A,E--0 to 10 inches; loamy fine sand
Bw1-2--10 to 35 inches; fine sand
Cg1..Cg3--35 to 80 inches; fine sand

Hiwood and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A,E--0 to 7 inches; loamy fine sand
Bw1-3--7 to 32 inches; fine sand
C1-3--32 to 80 inches; fine sand

Leafriver, wooded and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February

Ponding is shallowest (depth, months):
0.3 foot July August September
Ponding is deepest (depth, months):
0.5 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 10 inches; muck
A--10 to 13 inches; loamy sand
Cg1-3--13 to 80 inches; fine sand

1298--Borup Silt Loam, 0 To 2 Percent Slopes

Component Description

Borup and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.8 feet August
Ponding does not occur (months):
January February March July August December
Ponding is deepest (depth, months):
0.3 foot April May June
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
Ap--0 to 8 inches; silt loam
Bkg..Cg3--8 to 80 inches; silt loam

1302--Foldahl Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Foldahl and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,A--0 to 12 inches; fine sandy loam
Bw1,Bw2--12 to 30 inches; loamy fine sand
2C1-4--30 to 80 inches; loam

1304--Glyndon Very Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Glyndon and similar soils
Extent: 85 percent of the unit

Geomorphic description:
Rise on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A1--0 to 11 inches; very fine sandy loam
Bk1..Bk4--11 to 56 inches; silt loam
C--56 to 80 inches; silt loam

1305--Hilaire Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Hilaire and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; fine sandy loam
Bw1,Bw2--13 to 33 inches; loamy fine sand
2Bk1-2--33 to 80 inches; clay

1314--Tacoosh Mucky Peat, Map 22-30, 0 To 1 Percent Slopes

Component Description

Tacoosh and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky peat
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
2.1 feet February
Ponding is shallowest (depth, months):
0.3 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot March April May June
Available water capacity to a depth of 60 inches: 21.6 inches
Content of organic matter in the upper 10 inches: 87.0 percent

Typical profile:
Oe1--0 to 17 inches; mucky peat
Oe2,Oa--17 to 33 inches; mucky peat
A..Cg3--33 to 80 inches; silt loam

1316--Wheatville Loam, 0 To 2 Percent Slopes

Component Description

Wheatville and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 12 inches; loam
Bk1..C1--12 to 35 inches; very fine sandy loam
2Cg2-3--35 to 80 inches; stratified very fine sandy loam to silt loam to silty clay loam to clay

1326--Augsburg And Wabanica Soils, Depressional, 0 To 1 Percent Slopes

Component Description

Augsburg, depressional and similar soils
Extent: 0 to 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
3.0 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September October
Ponding is deepest (depth, months):
0.5 foot January February March April May June November December
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.1 percent
Typical profile:
Ap--0 to 9 inches; mucky very fine sandy loam
Bkg--9 to 16 inches; very fine sandy loam
Bg--16 to 32 inches; loamy very fine sand
2Cg1-3--32 to 80 inches; clay

Wabanica, depressional and similar soils
Extent: 0 to 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine deposits

Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding is shallowest (depth, months):
0.3 foot July August September October
Ponding is deepest (depth, months):
0.5 foot January February March April May
June November December
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 8.7 percent
Typical profile:
Ap--0 to 8 inches; mucky silt loam
Bg--8 to 26 inches; silty clay loam
Cg1,Cg2--26 to 68 inches; silty clay loam
2Cg3--68 to 80 inches; clay

1327B--Karlstad-Marquette Complex, 0 To 8 Percent Slopes

Component Description

Karlstad and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Beach ridge
Position on landform:
Backslope
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,E--0 to 11 inches; loamy sand
Bt1--11 to 14 inches; sandy loam
2Bt2--14 to 16 inches; gravelly sandy loam
2C1-2C3--16 to 80 inches; stratified very gravelly coarse sand to sand

Marquette and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Beach ridge
Position on landform:
Shoulder
Summit
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Beach deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A,E--0 to 10 inches; loamy sand
Bt1-2--10 to 18 inches; very gravelly sandy loam
C1-C4--18 to 80 inches; stratified very gravelly coarse sand to very gravelly sand

1328--Northwood Muck, Wooded, 0 To 1 Percent Slopes

Component Description

Northwood, wooded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits or till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 67.5 percent
Typical profile:
Oa--0 to 15 inches; muck
A--15 to 21 inches; fine sandy loam
Bg-Cg2--21 to 39 inches; fine sand
2Cg3--39 to 80 inches; loam

1333--Dora Muck, Wooded, 0 To 1 Percent Slopes

Component Description

Dora, wooded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 16.8 inches
Content of organic matter in the upper 10 inches: 55.5 percent
Typical profile:
Oa1--0 to 8 inches; muck
Oa2--8 to 26 inches; muck
A..Cg3--26 to 80 inches; silty clay

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

Small manmade areas that are used for industrial, sanitary, or mining applications and that contain water most of the year.

1399B--Two Inlets Loamy Sand, Noncalcareous Substratum, 0 To 6 Percent Slopes

Component Description

Two inlets and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach ridge
Position on landform:
Shoulder
Summit
Slope range: 0 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Beach deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 0.3 percent
Typical profile:
A--0 to 2 inches; loamy sand
E--2 to 4 inches; loamy coarse sand
Bt--4 to 17 inches; loamy coarse sand
C1..C4--17 to 80 inches; coarse sand

1401--Grygla Mucky Loamy Fine Sand, Depressional, 0 To 1 Percent Slopes

Component Description

Grygla, depressional and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine deposits and till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
3.0 feet February
Ponding is shallowest (depth, months):
0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 3.1 percent
Typical profile:
A--0 to 5 inches; mucky loamy fine sand
Bg,Cg1--5 to 36 inches; fine sand
2Cg2-3--36 to 80 inches; fine sandy loam

1402--Leafriver Muck, Wooded, 0 To 1 Percent Slopes

Component Description

Leafriver, wooded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):

0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 10 inches; muck
A--10 to 13 inches; loamy sand
Cg1-3--13 to 80 inches; sand

1404--Berner Muck, Wooded, 0 To 1 Percent Slopes

Component Description

Berner, wooded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits or till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.2 foot July August September
Ponding is deepest (depth, months):
0.3 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 87.5 percent
Typical profile:
Oa--0 to 20 inches; muck
A,Cg1--20 to 44 inches; fine sand
2Cg2-3--44 to 80 inches; silt loam

1405--Lallie Mucky Silt Loam, Map 18-22, 0 To 1 Percent Slopes

Component Description

Lallie and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding is shallowest (depth, months):
0.5 foot January February March June July
August September October
November December
Ponding is deepest (depth, months):
0.7 foot April May
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 10.6 percent
Typical profile:
A--0 to 8 inches; mucky silt loam
Cg1..Cg6--8 to 80 inches; silty clay loam

1414--Nereson Fine Sandy Loam, 0 To 3 Percent Slopes, Very Cobbly

Component Description

Nereson, very cobbly and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam
Bt--7 to 11 inches; sandy loam
2Bk1-2--11 to 29 inches; loam
2C1,2C2--29 to 80 inches; loam

1428--Karlsruhe Sandy Loam, Map 18-22, 0 To 3 Percent Slopes

Component Description

Karlsruhe and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on beach plain
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Beach deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
Bk--8 to 16 inches; sandy loam
C1..C6--16 to 80 inches; coarse sand

1444--Wurtsmith Loamy Sand, Map 22-30, 0 To 3 Percent Slopes

Component Description

Wurtsmith and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent

Typical profile:
A,E--0 to 5 inches; loamy sand
Bw1..BC--5 to 45 inches; sand
C1..C3--45 to 80 inches; sand

1448--Grano Clay, Map 18-22, 0 To 2 Percent Slopes

Component Description

Grano and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding does not occur (months):
January February March December
Ponding is deepest (depth, months):
0.3 foot April May June November
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 13 inches; clay
Bg,Cg1-2--13 to 54 inches; clay
Cg2-Cg3--54 to 80 inches; stratified silt loam to clay

1449--Grano Loam, Map 18-22, 0 To 2 Percent Slopes

Component Description

Grano and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding does not occur (months):
January February March December
Ponding is deepest (depth, months):
0.3 foot April May June November
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,A--0 to 11 inches; loam
Bg-Cg1--11 to 41 inches; silty clay
Cg2-Cg3--41 to 80 inches; stratified silt loam to clay

1807--Cathro Muck, Ponded, Map 22-30, 0 To 1 Percent Slopes

Component Description

Cathro, ponded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain

Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits or till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.0 foot all year
Available water capacity to a depth of 60 inches: 16.4 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
Oa1,Oa2--0 to 19 inches; muck
A-Cg3--19 to 80 inches; silt loam

1808--Markey Muck, Ponded, Map 22-30, 0 To 1 Percent Slopes

Component Description

Markey, ponded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.0 foot all year
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa1,Oa2--0 to 17 inches; muck
A,Cg--17 to 80 inches; fine sand

1918--Croke Very Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Croke and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap--0 to 12 inches; very fine sandy loam
Bw,C1--12 to 21 inches; loamy very fine sand
2C2,2C3--21 to 80 inches; clay

1923B--Garnes Loam, 1 To 4 Percent Slopes, Very Stony

Component Description

Garnes, very stony and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Rise on lake plain
Slope range: 1 to 4 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine deposits and till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
6.7 feet (transitory) August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap, E--0 to 6 inches; loam
Bt--6 to 13 inches; sandy clay loam
Bk1-C2--13 to 80 inches; sandy loam

1984--Leafriver Muck, 0 To 1 Percent Slopes

Component Description

Leafriver and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic materials over glaciolacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February
Ponding is shallowest (depth, months):
0.3 foot July August September
Ponding is deepest (depth, months):
0.5 foot January February March April May
June October November December
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa1,Oa2--0 to 13 inches; muck
Cg1,Cg2--13 to 80 inches; fine sand

W--Water

Component Description

Water
Extent: 100 percent of the unit

Naturally occurring basins of surface water.

St. Louis County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Scott County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Soil Descriptions - Non Technical

7A--Hubbard Loamy Sand, 0 To 2 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,AB--0 to 20 inches; loamy sand
Bw--20 to 32 inches; loamy sand
BC,C--32 to 80 inches; sand

7B--Hubbard Loamy Sand, 2 To 6 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Shoulder
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 18 inches; loamy sand
Bw--18 to 23 inches; loamy sand
BC,C--23 to 80 inches; sand

7C--Hubbard Loamy Sand, 6 To 12 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace

Position on landform:
Backslope
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,AB--0 to 12 inches; loamy sand
Bw--12 to 33 inches; coarse sand
C--33 to 80 inches; coarse sand

32B--Nebish Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Nebish and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 5 inches; fine sandy loam
Bt--5 to 43 inches; clay loam
C--43 to 80 inches; loam

32C--Nebish Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Nebish and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam

BE--7 to 11 inches; fine sandy loam
Bt--11 to 44 inches; clay loam
C--44 to 80 inches; loam

32D--Nebish Fine Sandy Loam, 12 To 18 Percent Slopes

Component Description

Nebish and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
Ap--0 to 3 inches; fine sandy loam
Bt--3 to 22 inches; clay loam
C--22 to 80 inches; loam

32E--Nebish Fine Sandy Loam, 18 To 35 Percent Slopes

Component Description

Nebish and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 18 to 35 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
A--0 to 4 inches; fine sandy loam
E--4 to 13 inches; fine sandy loam
Bt--13 to 36 inches; clay loam
C--36 to 80 inches; loam

38B--Waukon Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Waukon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 8 inches; fine sandy loam
E--8 to 12 inches; fine sandy loam
BE,Bt--12 to 43 inches; loam
Bk--43 to 80 inches; loam

75--Bluffton Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Bluffton, depressional and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2--0 to 13 inches; loam
Bg--13 to 40 inches; loam
Cg--40 to 80 inches; loam

125--Beltrami Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Beltrami and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 6 inches; fine sandy loam
Bt1--6 to 12 inches; loam

Bt2,Bt4--12 to 48 inches; clay loam
C--48 to 80 inches; loam

152C--Milaca Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Milaca and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
A--0 to 4 inches; fine sandy loam
E--4 to 12 inches; fine sandy loam
Bt--12 to 20 inches; fine sandy loam
BC--20 to 42 inches; sandy loam
Cd--42 to 80 inches; sandy loam

152E--Milaca Fine Sandy Loam, 12 To 25 Percent Slopes

Component Description

Milaca and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Shoulder
Backslope
Slope range: 12 to 25 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
A--0 to 3 inches; fine sandy loam
E--3 to 12 inches; fine sandy loam
Bt--12 to 20 inches; fine sandy loam
BC--20 to 40 inches; sandy loam
Cd--40 to 80 inches; sandy loam

158A--Zimmerman Fine Sand, 0 To 3 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Ap--0 to 7 inches; fine sand
E,Bw,E&Bt--7 to 80 inches; fine sand

158B--Zimmerman Fine Sand, 3 To 6 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Summit
Backslope
Slope range: 3 to 6 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 6 inches; fine sand
E,Bw,E&Bt--6 to 80 inches; fine sand

158C--Zimmerman Fine Sand, 6 To 12 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 6 inches; fine sand
E,Bw,E&Bt--6 to 80 inches; fine sand

158E--Zimmerman Fine Sand, 12 To 25 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Shoulder
Backslope

Slope range: 12 to 25 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 3 inches; fine sand
E,Bw,E&Bt--3 to 80 inches; fine sand

161--Isanti Fine Sandy Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Isanti, depressional and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 9.0 percent
Typical profile:
A1,A3--0 to 16 inches; fine sandy loam
Bg--16 to 28 inches; loamy fine sand
Cg--28 to 80 inches; fine sand

162--Lino Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Lino and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
Bw--8 to 38 inches; loamy fine sand
Cg--38 to 80 inches; fine sand

164A--Mora Loam, 0 To 3 Percent Slopes

Component Description

Mora and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 6 inches; loam
E--6 to 15 inches; sandy loam
BE,Bt--15 to 36 inches; sandy loam
BC--36 to 48 inches; sandy loam
Cd--48 to 80 inches; sandy loam

165--Parent Loam, 0 To 2 Percent Slopes

Component Description

Parent and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Interdrumlin
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
A1,A2--0 to 15 inches; loam
Bg--15 to 33 inches; loam
BC--33 to 40 inches; sandy loam
Cd--40 to 80 inches; sandy loam

166--Ronneby Loam, 0 To 2 Percent Slopes

Component Description

Ronneby and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Interdrumlin
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.7 foot April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February August
September
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 4 inches; loam
E--4 to 12 inches; fine sandy loam
BE,Bt--12 to 45 inches; fine sandy loam
BC--45 to 56 inches; fine sandy loam
Cd--56 to 80 inches; fine sandy loam

169B--Braham Loamy Fine Sand, 3 To 6 Percent Slopes

Component Description

Braham and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 3 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February June July
August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; loamy fine sand
E--9 to 21 inches; loamy fine sand
2Bt--21 to 46 inches; clay loam
2Bk--46 to 80 inches; loam

169C--Braham Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Braham and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:

Ap--0 to 8 inches; loamy fine sand
E--8 to 28 inches; loamy sand
2Bt--28 to 48 inches; clay loam
2Bk--48 to 80 inches; loam

169D--Braham Loamy Fine Sand, 12 To 18 Percent Slopes

Component Description

Braham and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 32 inches; loamy sand
2Bt--32 to 55 inches; clay loam
2Bk--55 to 80 inches; loam

204B--Cushing Fine Sandy Loam, 2 To 8 Percent Slopes

Component Description

Cushing and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 8 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
A--0 to 6 inches; fine sandy loam
E,B/E--6 to 22 inches; fine sandy loam
Bt,BC--22 to 44 inches; clay loam
C--44 to 80 inches; loam

204C--Cushing Fine Sandy Loam, 8 To 15 Percent Slopes

Component Description

Cushing and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder

Backslope
Slope range: 8 to 15 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; fine sandy loam
E--7 to 21 inches; fine sandy loam
Bt--21 to 44 inches; clay loam
C--44 to 80 inches; sandy loam

258B--Sandberg Loamy Coarse Sand, 1 To 6 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Summit
Shoulder
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 14 inches; loamy coarse sand
Bw--14 to 32 inches; gravelly coarse sand
C--32 to 80 inches; sand

258C--Sandberg Loamy Coarse Sand, 6 To 12 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 11 inches; loamy coarse sand
Bw--11 to 26 inches; coarse sand
C--26 to 80 inches; coarse sand

258E--Sandberg Loamy Coarse Sand, 12 To 35 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on stream terrace
Escarpment
Position on landform:
Shoulder
Backslope
Slope range: 12 to 35 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 11 inches; loamy coarse sand
Bw--11 to 27 inches; coarse sand
C--27 to 80 inches; gravelly coarse sand

260--Duelm Loamy Sand, 0 To 2 Percent Slopes

Component Description

Duelm and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.0 feet February August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,AB--0 to 16 inches; loamy sand
Bw--16 to 30 inches; coarse sand
C--30 to 80 inches; coarse sand

261--Isan Sandy Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Isan, depressional and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None

Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 14 inches; sandy loam
AB,Bg--14 to 34 inches; loamy sand
Cg--34 to 80 inches; coarse sand

325--Prebish Fine Sandy Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Prebish, depressional and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Interdrumlin
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.0 foot February March August September
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A1,A2--0 to 15 inches; fine sandy loam
Bg,BC--15 to 41 inches; sandy loam
Cd--41 to 80 inches; fine sandy loam

341--Arvilla Sandy Loam, 0 To 2 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 14 inches; sandy loam
Bw--14 to 20 inches; sandy loam
2Bw,2Bk,2C--20 to 80 inches; gravelly coarse sand

346--Talmoon Loam, 0 To 2 Percent Slopes

Component Description

Talmoon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
Ap--0 to 7 inches; loam
Eg--7 to 12 inches; fine sandy loam
Btg--12 to 32 inches; clay loam
Bk--32 to 80 inches; loam

373--Renshaw Loam, 0 To 3 Percent Slopes

Component Description

Renshaw and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 15 inches; loam
2Bw,2C--15 to 80 inches; gravelly coarse sand

454B--Mahtomedi Loamy Coarse Sand, 1 To 6 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches

Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 9 inches; loamy coarse sand
Bw--9 to 36 inches; gravelly coarse sand
BC,C--36 to 80 inches; coarse sand

454C--Mahtomedi Loamy Coarse Sand, 6 To 15 Percent Slopes

Component Description

Mahtomedi and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 6 to 15 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 0.4 percent
Typical profile:
Ap--0 to 3 inches; loamy coarse sand
Bw--3 to 17 inches; gravelly sand
C--17 to 80 inches; sand

540--Seelyeville Muck, 0 To 1 Percent Slopes

Component Description

Seelyeville and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 10 inches; muck
Oa2,Oa5--10 to 80 inches; muck

543--Markey Muck, 0 To 1 Percent Slopes

Component Description

Markey and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace

Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 15.8 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 36 inches; muck
2A--36 to 42 inches; loamy sand
2Cg--42 to 80 inches; sand

544--Cathro Muck, 0 To 1 Percent Slopes

Component Description

Cathro and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 20.0 inches
Content of organic matter in the upper 10 inches: 72.5 percent
Typical profile:
Oa1,Oa2--0 to 30 inches; muck
2A--30 to 38 inches; loam
2Cg--38 to 80 inches; loam

565--Eckvoll Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Eckvoll and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April

Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February June July
August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; loamy fine sand
E--9 to 24 inches; fine sand
2Bt--24 to 45 inches; loam
2C--45 to 80 inches; loam

567--Verndale Sandy Loam, 0 To 2 Percent Slopes

Component Description

Verndale and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 19 inches; sandy loam
2Bw--19 to 28 inches; sand
2C--28 to 80 inches; sand

623A--Pierz Sandy Loam, 0 To 2 Percent Slopes

Component Description

Pierz and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A,AB--0 to 16 inches; sandy loam
Bt--16 to 29 inches; sandy loam
2C--29 to 80 inches; gravelly sand

623B--Pierz Sandy Loam, 2 To 6 Percent Slopes

Component Description

Pierz and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:

Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 22 inches; sandy loam
2C--22 to 80 inches; very gravelly coarse sand

708--Rushlake Coarse Sand, 1 To 4 Percent Slopes

Component Description

Rushlake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach
Position on landform:
Flats and slight rises
Slope range: 1 to 4 percent
Surface layer texture: Coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
4.0 feet February August September
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
A--0 to 9 inches; coarse sand
C--9 to 80 inches; coarse sand

730A--Sanburn Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Sanburn and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 6 inches; fine sandy loam
Bt--6 to 18 inches; sandy loam
2Bt,2BC,2C--18 to 80 inches; gravelly coarse sand

730B--Sanburn Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Sanburn and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap--0 to 5 inches; fine sandy loam
Bt--5 to 19 inches; sandy loam
2BC,2C--19 to 80 inches; gravelly coarse sand

732B--Bushville Fine Sand, 2 To 6 Percent Slopes

Component Description

Bushville and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 8 inches; fine sand
E1,E2,E3--8 to 28 inches; fine sand
2Bt--28 to 33 inches; fine sandy loam
2BC--33 to 43 inches; fine sandy loam
2Cd--43 to 80 inches; sandy loam

768--Mosford Sandy Loam, 0 To 2 Percent Slopes

Component Description

Mosford and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained

Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bw--12 to 16 inches; coarse sandy loam
2Bw--16 to 21 inches; coarse sand
2C--21 to 80 inches; sand

771--Elkriver Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded

Component Description

Elkriver, rarely flooded and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
A1,A3--10 to 35 inches; fine sandy loam
Bw--35 to 39 inches; fine sandy loam
2C--39 to 80 inches; sand

799--Seelyeville And Bowstring Soils, 0 To 1 Percent Slopes, Frequently
Flooded

Component Description

Seelyeville, frequently flooded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:

Oa1--0 to 12 inches; muck
Oa2,Oa3--12 to 80 inches; muck

Bowstring, frequently flooded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material and alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 21.3 inches
Content of organic matter in the upper 10 inches: 65.0 percent
Typical profile:
Oa1,Oa2--0 to 38 inches; muck
Cg--38 to 47 inches; stratified fine sand to fine sandy loam
O'a1--47 to 80 inches; muck

1013--Pits, Quarry

Component Description

Pits
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats
Surface layer texture: Unweathered bedrock
Depth to restrictive feature:
Bedrock (lithic): 0 to 4 inches
Parent material:
Bedrock, granite
Typical profile:
unweathered bedrock

This map unit consists of open pits where granite has been mined. These areas are active or abandoned. Some pits have water in them because they were mined below the regional aquifer.

1015--Udipsamments, Cut And Fill Land

Component Description

Udipsamments (cut and fill land)
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 0 to 6 percent
Parent material:
Variable sandy material
Flooding: None

The Udipsamments component, comprises of nearly level areas that had minimal grading or were borrow areas. The cut and fill material is dominatly the sandy parent material. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1016--Udorthents, Loamy, Cut And Fill Land

Component Description

Udorthents (cut and fill land)
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Slope range: 0 to 12 percent
Parent material:
Variable loamy material
Flooding: None

The Udorthents component, consists primarily of cut or fill operations to the landscape to level and or fill areas for development. The cut and or fill material is dominatly loamy soil material. Up to 30 percent of this map unit is covered by impervious surfaces. The majority of the area has been disturbed by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1028--Udorthents-Pits, Gravel, Complex

Component Description

Udorthents
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Stream terrace
Parent material:
Outwash

Udorthents are areas of soil that support plant growth and are areas of the pit that have been reclaimed or abandoned. Because of the variability of this component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

Pits, gravel
Extent: 40 percent of the unit
Geomorphic description:
Stream terrace
Moraine
Outwash plain
Parent material:
Sandy and gravelly outwash

Gravel pits are areas that have been mined for gravel or sand. This map unit is actively being mined or is an abandoned pit. Because of the variability of this component in this map unit, interpretation for specific uses are not available. Onsite investigation is needed.

1109--Isanti Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Isanti and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches

Content of organic matter in the upper 10 inches: 9.0 percent
Typical profile:
Ap,AB--0 to 16 inches; loamy fine sand
Bg--16 to 23 inches; loamy fine sand
BCg,Cg--23 to 80 inches; fine sand

1110--Isan Sandy Loam, 0 To 2 Percent Slopes

Component Description

Isan and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap,A--0 to 18 inches; sandy loam
AB,Bg--18 to 29 inches; loamy sand
Cg--29 to 80 inches; coarse sand

1223--Sandberg-Arvilla Complex, 0 To 3 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Slight rise
Slope range: 1 to 3 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 11 inches; loamy coarse sand
Bw,BC--11 to 35 inches; gravelly coarse sand
C--35 to 80 inches; gravelly coarse sand

Arvilla and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 14 inches; coarse sandy loam
Bw--14 to 17 inches; coarse sandy loam
2Bw,2C--17 to 80 inches; gravelly coarse sand

1224--Hubbard-Verndale Complex, 0 To 3 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Slight rise
Slope range: 0 to 3 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 11 inches; loamy coarse sand
Bw--11 to 27 inches; loamy sand
BC,C--27 to 80 inches; coarse sand

Verndale and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; coarse sandy loam
Bt--10 to 16 inches; coarse sandy loam
2Bw--16 to 45 inches; coarse sand
2C--45 to 80 inches; sand

1231--Hubbard-Mosford Complex, 0 To 3 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Slight rise
Slope range: 0 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained

Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; loamy sand
Bw--13 to 19 inches; loamy sand
BC,C--19 to 80 inches; sand

Mosford and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw--13 to 16 inches; coarse sandy loam
2Bw--16 to 35 inches; coarse sand
2C--35 to 80 inches; sand

1253B--Stonelake-Sanburn Complex, 1 To 6 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 1 to 6 percent
Surface layer texture: Gravelly loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.9 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 4 inches; gravelly loamy sand
Bw--4 to 11 inches; gravelly coarse sand
Bt--11 to 24 inches; very gravelly coarse sand
BC,C--24 to 80 inches; gravelly sand

Sanburn and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Footslope
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:

Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap--0 to 5 inches; sandy loam
Bt--5 to 20 inches; gravelly sandy loam
2BC,2C--20 to 80 inches; gravelly coarse sand

1253C--Stonelake-Sanburn Complex, 6 To 15 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 6 to 15 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap--0 to 5 inches; gravelly loamy coarse sand
Bt--5 to 16 inches; very gravelly loamy coarse sand
BC,C--16 to 80 inches; gravelly coarse sand

Sanburn and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Footslope
Backslope
Slope range: 6 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
Bt--8 to 17 inches; sandy loam
2C--17 to 80 inches; coarse sand

1253E--Stonelake-Sanburn Complex, 15 To 40 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 15 to 40 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
A--0 to 2 inches; loamy coarse sand
E--2 to 8 inches; very gravelly loamy coarse sand
Bt--8 to 16 inches; very gravelly coarse sand
C--16 to 80 inches; gravelly coarse sand

Sanburn and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Footslope
Backslope
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
A--0 to 5 inches; sandy loam
Bt--5 to 14 inches; sandy loam
2C--14 to 80 inches; coarse sand

1254--Ricelake Fine Sandy Loam, 0 To 3 Percent Slopes

Component Description

Ricelake and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glacial outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 3.2 percent
Typical profile:
A--0 to 9 inches; fine sandy loam
E--9 to 27 inches; loamy fine sand
Bt--27 to 48 inches; fine sandy loam
2Cg--48 to 80 inches; clay loam

1255--Elkriver Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Elkriver, occasionally flooded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Position on landform:

Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
A1,A3--10 to 26 inches; fine sandy loam
Bw--26 to 32 inches; very fine sandy loam
2C--32 to 80 inches; sand

1256--Cantlin Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Cantlin and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
Bw--8 to 22 inches; loamy fine sand
BC,C--22 to 80 inches; fine sand

1257--Elkriver-Mosford Complex, 0 To 6 Percent Slopes, Rarely Flooded

Component Description

Elkriver, rarely flooded and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):

3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 11 inches; fine sandy loam
AB--11 to 20 inches; fine sandy loam
Bw--20 to 34 inches; fine sandy loam
2C--34 to 80 inches; fine sand

Mosford, rarely flooded and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Slight rise
Slope range: 0 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 11 inches; fine sandy loam
Bw--11 to 16 inches; fine sandy loam
2Bw--16 to 25 inches; fine sand
2C--25 to 80 inches; sand

1258B--Zimmerman Fine Sand, Thick Solum, 1 To 6 Percent Slopes

Component Description

Zimmerman, thick solum and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 2 inches; fine sand
Bw,E--2 to 62 inches; fine sand
E'&Bt--62 to 80 inches; fine sand

1258C--Zimmerman Fine Sand, Thick Solum, 6 To 12 Percent Slopes

Component Description

Zimmerman, thick solum and similar soils
Extent: 95 percent of the unit
Geomorphic description:

Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
A--0 to 3 inches; fine sand
Bw,E--3 to 70 inches; fine sand
E'&Bt--70 to 80 inches; fine sand

1258E--Zimmerman Fine Sand, Thick Solum, 12 To 35 Percent Slopes

Component Description

Zimmerman, thick solum and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Shoulder
Backslope
Slope range: 12 to 35 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 2 inches; fine sand
Bw,E--2 to 62 inches; fine sand
E'&Bt--62 to 80 inches; fine sand

1260B--Stonelake-Nebish Complex, 2 To 6 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; loamy coarse sand
Bt--8 to 30 inches; very gravelly loamy coarse sand
BC,C--30 to 80 inches; gravelly sand

Nebish and similar soils

Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 6 inches; fine sandy loam
E--6 to 9 inches; fine sandy loam
Bt--9 to 43 inches; clay loam
Bk--43 to 80 inches; loam

1260C--Stonelake-Nebish Complex, 6 To 12 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
Ap--0 to 7 inches; loamy sand
E--7 to 20 inches; loamy coarse sand
Bt--20 to 42 inches; very gravelly coarse sand
C--42 to 80 inches; very gravelly coarse sand

Nebish and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
Ap--0 to 3 inches; fine sandy loam
E--3 to 10 inches; fine sandy loam

Bt--10 to 29 inches; clay loam
Bk--29 to 80 inches; loam

1260E--Stonelake-Nebish Complex, 12 To 25 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 12 to 25 percent
Surface layer texture: Gravelly coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.9 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
A--0 to 5 inches; gravelly coarse sandy loam
Bw--5 to 11 inches; very gravelly coarse sand
Bt--11 to 20 inches; very gravelly coarse sand
BC,C--20 to 80 inches; very gravelly coarse sand

Nebish and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 25 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
A--0 to 5 inches; fine sandy loam
EB--5 to 9 inches; fine sandy loam
Bt--9 to 27 inches; clay loam
Bk--27 to 80 inches; loam

1270B--Milaca Fine Sandy Loam, Moderately Wet, 3 To 6 Percent Slopes

Component Description

Milaca, moderately wet and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drumlin
Position on landform:
Summit
Backslope
Slope range: 3 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April

Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 0.6 percent
Typical profile:
A--0 to 6 inches; fine sandy loam
E,BE--6 to 19 inches; fine sandy loam
Bt--19 to 28 inches; fine sandy loam
BC--28 to 45 inches; fine sandy loam
Cd--45 to 80 inches; sandy loam

1288--Seelyeville-Markey Complex, Ponded, 0 To 1 Percent Slopes

Component Description

Seelyeville, ponded and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 15 inches; muck
Oa2,Oa3--15 to 80 inches; muck

Markey, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.8 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 27 inches; muck
A--27 to 32 inches; loamy sand
Cg--32 to 80 inches; sand

1356--Water, Miscellaneous

Component Description

Water
Extent: 100 percent of the unit

Miscellaneous water map units are not naturally occuring water

areas. They are constructed and include; sewage lagoons, storm water sediment basins with a permanent pool of water, and aquaculture ponds. This map unit is not soil, no interpretations assigned.

1946--Fordum-Winterfield Complex, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Fordum, frequently flooded and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Concave drainageways
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 6.6 percent
Typical profile:
A--0 to 7 inches; fine sandy loam
Cg--7 to 28 inches; sandy loam
2Cg--28 to 80 inches; sand

Winterfield, frequently flooded and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
A--0 to 8 inches; loamy fine sand
C1,C2--8 to 20 inches; sand
C3,C5--20 to 80 inches; sand

W--Water

Component Description

Water
Extent: 100 percent of the unit

Soil Descriptions - Non Technical

5B--Dakota Loam, 1 To 6 Percent Slopes

Component Description

Dakota and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 23 inches; sandy clay loam
H3--23 to 35 inches; gravelly coarse sandy loam
H4--35 to 60 inches; gravelly sand

27B--Dickinson Loam, 2 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 40 inches; fine sandy loam
H3--40 to 51 inches; fine sand
H4--51 to 60 inches; fine sand

35--Blue Earth Mucky Silt Loam

Component Description

Blue earth and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 60 inches; mucky silt loam

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Rim on depression on moraine
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 26 inches; clay loam
H3--26 to 38 inches; loam
H4--38 to 60 inches; loam

94B--Terril Loam, 2 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on moraine
Position on landform:
Footslope
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 25 inches; loam
H2--25 to 47 inches; loam
H3--47 to 60 inches; sandy loam

102B--Clarion Loam, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit

Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 32 inches; loam
H3--32 to 60 inches; loam

106B--Lester Loam, 2 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 41 inches; clay loam
H3--41 to 60 inches; loam

106C2--Lester Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 20 inches; clay loam
H3--20 to 60 inches; loam

109--Cordova Clay Loam

Component Description

Cordova and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway on moraine
Flat on moraine
Position on landform:
Backslope
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 30 inches; clay loam
H3--30 to 60 inches; clay loam

110--Marna Silty Clay Loam

Component Description

Marna and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on moraine
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 21 inches; silty clay loam
H2--21 to 32 inches; silty clay
H3--32 to 60 inches; clay loam

112--Harps Clay Loam

Component Description

Harps and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Rim on depression on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 19 inches; clay loam

H2--19 to 31 inches; clay loam
H3--31 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway on moraine
Flat on moraine
Position on landform:
Backslope
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; clay loam
H2--17 to 30 inches; clay loam
H3--30 to 60 inches; loam

114--Glencoe Clay Loam

Component Description

Glencoe and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.7 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 32 inches; clay loam
H3--32 to 50 inches; clay loam
H4--50 to 60 inches; loam

118--Crippin Loam

Component Description

Crippin and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on moraine
Position on landform:
Backslope
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 32 inches; loam
H3--32 to 60 inches; loam

130--Nicollet Clay Loam

Component Description

Nicollet and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on moraine
Position on landform:
Backslope
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; clay loam
H2--15 to 31 inches; clay loam
H3--31 to 60 inches; clay loam

134--Okoboji Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 12 inches; silty clay loam
H2--12 to 42 inches; silty clay loam
H3--42 to 60 inches; silty clay loam

222B--Lasa Loamy Fine Sand, 2 To 8 Percent Slopes

Component Description

Lasa and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Summit
Slope range: 2 to 8 percent

Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 12 inches; loamy fine sand
H2--12 to 40 inches; fine sand
H3--40 to 60 inches; stratified fine sand to loamy fine sand,
stratified fine sand to loamy fine sand

239--Le Sueur Clay Loam

Component Description

Le sueur and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 37 inches; clay loam
H3--37 to 60 inches; clay loam

317--Oshawa Silty Clay Loam, Frequently Flooded

Component Description

Oshawa and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Meander on flood plain
Oxbow on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 60 inches; silty clay loam

329--Chaska Loam, Occasionally Flooded

Component Description

Chaska and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 30 inches; very fine sandy loam
H3--30 to 60 inches; stratified silt loam to silty clay loam

336--Delft Clay Loam

Component Description

Delft and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway on moraine
Swale on moraine
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 37 inches; clay loam
H3--37 to 45 inches; clay loam
H4--45 to 60 inches; clay loam

386--Okoboji Mucky Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
H1--0 to 14 inches; mucky silty clay loam
H2--14 to 49 inches; silty clay loam
H3--49 to 60 inches; silty clay loam

463B--Minneiska Loam, 1 To 4 Percent Slopes

Component Description

Minneiska and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on alluvial fan
Hill on alluvial fan
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 60 inches; stratified gravelly loamy sand to fine sandy loam

525--Muskego Muck

Component Description

Muskego and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 20.2 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
H1--0 to 40 inches; muck
H2--40 to 60 inches; coprogenous earth

539--Klossner Muck

Component Description

Klossner and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 19.3 inches
Content of organic matter in the upper 10 inches: 42.5 percent

Typical profile:
H1--0 to 32 inches; muck
H2--32 to 41 inches; mucky silt loam
H3--41 to 60 inches; silty clay loam

743--Glencoe Clay Loam, Stratified Substratum

Component Description

Glencoe and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 26 inches; clay loam
H3--26 to 45 inches; clay loam
H4--45 to 60 inches; stratified silt loam to sand

772F--Swanlake-Lasa Complex, 18 To 65 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Backslope
Slope range: 18 to 65 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 32 inches; loam
H3--32 to 60 inches; loam

Lasa and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on moraine
Hill on stream terrace
Position on landform:
Shoulder
Summit
Backslope
Slope range: 18 to 40 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches

Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 9 inches; loamy fine sand
H2--9 to 27 inches; fine sand
H3--27 to 60 inches; stratified fine sand to loamy fine sand

887B--Clarion-Swanlake Complex, 3 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 3 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 44 inches; loam
H3--44 to 60 inches; loam

Swanlake and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Backslope
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 41 inches; loam
H3--41 to 60 inches; loam

919--Canisteo-Mayer Complex

Component Description

Canisteo and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Rim on depression on moraine
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August

Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 26 inches; clay loam
H3--26 to 36 inches; clay loam
H4--36 to 60 inches; clay loam

Mayer and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Rim on depression on moraine
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 35 inches; loam
H3--35 to 60 inches; gravelly sand

920B--Clarion-Hawick Complex, 3 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 3 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 29 inches; clay loam
H3--29 to 60 inches; loam

Hawick and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 3 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 2.3 percent

Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 15 inches; gravelly coarse sand
H3--15 to 60 inches; gravelly coarse sand

920C2--Clarion-Hawick-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 7 inches; loam
Bw--7 to 25 inches; loam
C--25 to 60 inches; loam

Hawick and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 14 inches; gravelly coarse sand
H3--14 to 60 inches; coarse sand

Storden and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 26 inches; loam
H3--26 to 60 inches; loam

921C2--Clarion-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 26 inches; loam
C--26 to 60 inches; loam

Storden and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 47 inches; loam
H3--47 to 60 inches; loam

944B--Lester-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 52 inches; clay loam
H3--52 to 60 inches; loam

Hawick and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on moraine

Position on landform:
Backslope
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 12 inches; sandy loam
H2--12 to 48 inches; sand
H3--48 to 60 inches; coarse sand

944C2--Lester-Hawick-Swanlake Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 34 inches; clay loam
H3--34 to 60 inches; loam

Hawick and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 42 inches; gravelly coarse sand
H3--42 to 60 inches; gravelly coarse sand

Swanlake and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 29 inches; loam
H3--29 to 60 inches; loam

945D2--Lester-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 34 inches; clay loam
H3--34 to 60 inches; loam

Storden and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

945F--Lester-Storden Complex, 18 To 65 Percent Slopes

Component Description

Lester and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 18 to 50 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:

H1--0 to 9 inches; loam
H2--9 to 35 inches; clay loam
H3--35 to 60 inches; loam

Storden and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 18 to 65 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 26 inches; loam
H3--26 to 60 inches; loam

946--Nicollet-Linder Complex

Component Description

Nicollet and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flat on moraine
Position on landform:
Backslope
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 21 inches; loam
H3--21 to 60 inches; loam, clay loam

Linder and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Flat on moraine
Position on landform:
Backslope
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 5.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 26 inches; sandy loam
H3--26 to 60 inches; sand

956--Canisteo-Glencoe Complex

Component Description

Canisteo and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Rim on depression on moraine
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 23 inches; clay loam
H3--23 to 35 inches; clay loam
H4--35 to 60 inches; clay loam

Glencoe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 12 inches; clay loam
H2--12 to 33 inches; clay loam
H3--33 to 43 inches; clay loam
H4--43 to 60 inches; loam

978--Cordova-Rolfe Complex

Component Description

Cordova and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat on moraine
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 13 inches; clay loam
H2--13 to 27 inches; clay loam
H3--27 to 60 inches; clay loam

Rolfe and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 43 inches; silty clay
H3--43 to 60 inches; clay loam, loam

1016--Udorthents, Loamy

Component Description

Udorthents
Extent: 90 percent of the unit
Slope range: 0 to 30 percent
Surface layer texture: Clay loam
Drainage class: Well drained
Flooding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 60 inches; clay loam
H2--60 to 80 inches;

1030--Udorthents-Pits, Gravel Complex

Component Description

Udorthents
Extent: 50 percent of the unit
Slope range: 0 to 50 percent
Flooding: None

Pits
Extent: 40 percent of the unit

1075--Klossner And Muskego Soils, Ponded

Component Description

Klossner and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 19.1 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 38 inches; muck
H2--38 to 60 inches; clay loam

Muskego and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Depression

Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 1.5 feet all year
Available water capacity to a depth of 60 inches: 20.0 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 39 inches; muck
H2--39 to 60 inches; coprogenous earth

1081--Minneiska-Abscota Complex, Occasionally Flooded

Component Description

Minneiska and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; fine sandy loam
H2--9 to 60 inches; stratified loamy fine sand to fine sandy loam to silt loam

Abscota and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 8 inches; loamy fine sand
H2--8 to 60 inches; stratified fine sand to loamy fine sand

1093--Webster-Biscay Complex

Component Description

Webster and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flat on moraine
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April

Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 21 inches; clay loam
H2--21 to 35 inches; clay loam
H3--35 to 60 inches; loam

Biscay and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Flat
Swale on moraine
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 35 inches; clay loam
H3--35 to 60 inches; sand

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

1833--Coland Clay Loam, Occasionally Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Swale on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 40 inches; clay loam
H3--40 to 60 inches; sandy loam

1834--Coland Clay Loam, Frequently Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat on flood plain
Meander on flood plain
Slope range: 0 to 1 percent

Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 48 inches; silty clay loam
H3--48 to 60 inches; stratified loamy fine sand to loam, sandy clay loam

1901B--Lester-Le Sueur Complex, 1 To 6 Percent Slopes

Component Description

Lester and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 41 inches; clay loam
H3--41 to 60 inches; loam

Le sueur and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Flat on moraine
Position on landform:
Backslope
Slope range: 1 to 4 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 30 inches; clay loam
H3--30 to 60 inches; clay loam

1999--Minneiska-Kalmarville Complex, Frequently Flooded

Component Description

Minneiska and similar soils
Extent: 55 percent of the unit

Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 6 inches; sandy loam
H2--6 to 60 inches; stratified sand to loamy sand to sandy loam to silt loam, stratified silt loam to sand

Kalmarville and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Channel on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October December
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 54 inches; stratified fine sand to fine sandy loam to silt loam, fine sandy loam
H3--54 to 60 inches; loamy fine sand

W--Water

Component Description

Water
Extent: 100 percent of the unit

Stearns County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Steele County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Stevens County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Soil Descriptions - Non Technical

GP--Pits, Gravel-Udipsamments Complex

Component Description

Pits, gravel
Extent: 80 percent of the unit

Gravel pits are areas that have been mined for gravel or sand. This map unit is actively being mined or is an abandoned pit. This component of the map unit is too variable to assign interpretations. On-site investigations are needed.

Additional Components

Udipsamments: 20 percent of the unit

J1A--Parnell Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Parnell, depressional and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Depression on till plain
Depression on lake plain
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A1,A2--0 to 22 inches; silty clay loam
Btg--22 to 55 inches; silty clay
BCg--55 to 80 inches; silty clay loam

Additional Components

Colvin and similar soils: 0 to 10 percent of the unit
Vallers and similar soils: 0 to 10 percent of the unit

J2A--La Prairie Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

La prairie and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained

Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 9 inches; loam
A--9 to 38 inches; loam
Bw--38 to 50 inches; loam
C--50 to 60 inches; loam

Additional Components

Lamoure and similar soils: 5 to 15 percent of the unit

J3A--Arveson Sandy Loam, 0 To 2 Percent Slopes

Component Description

Arveson and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Rim on depression on outwash plain
Drainageway on outwash plain
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Ak--10 to 22 inches; sandy loam
Bkg--22 to 35 inches; sandy loam
2Cg--35 to 80 inches; sand

Additional Components

Marysland and similar soils: 5 to 15 percent of the unit
Marysland, depressional and similar soils: 1 to 10 percent of the unit
Malachy and similar soils: 1 to 10 percent of the unit

J4A--Rockwell Loam, 0 To 2 Percent Slopes

Component Description

Rockwell and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Rim on depression on outwash plain
Drainageway on outwash plain
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash over lacustrine deposits
Outwash over till
Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
Ap--0 to 9 inches; loam
Ak--9 to 16 inches; loam
Bg--16 to 25 inches; sandy loam
2Cg--25 to 45 inches; stratified silt loam to silty clay loam
3Cg--45 to 80 inches; clay loam

Additional Components

Arveson and similar soils: 0 to 15 percent of the unit

J5A--Fossum Sandy Loam, 0 To 2 Percent Slopes

Component Description

Fossum and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Flat on outwash plain
Drainageway on outwash plain
Rim on depression on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A1--0 to 13 inches; sandy loam
A2--13 to 21 inches; sand
Cg--21 to 80 inches; fine sand

Additional Components

Arveson and similar soils: 5 to 15 percent of the unit
Fossum, depressional and similar soils: 1 to 5 percent of the unit
Hecla and similar soils: 0 to 5 percent of the unit

J6A--Mcdonaldsville Silty Clay, 0 To 2 Percent Slopes

Component Description

Mcdonaldsville and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Flat on outwash plain
Drainageway on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine deposits over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:

Ap,A1--0 to 17 inches; silty clay
Bw,BC--17 to 36 inches; silty clay
2C--36 to 80 inches; sand

Additional Components

Better drained soil and similar soils: 5 to 15 percent of the unit

J7A--Sverdrup Sandy Loam, 0 To 2 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bw--12 to 26 inches; sandy loam
2C--26 to 80 inches; sand

Additional Components

Arveson and similar soils: 0 to 10 percent of the unit
Clontarf and similar soils: 1 to 10 percent of the unit
Egeland and similar soils: 0 to 10 percent of the unit

J7B--Sverdrup Sandy Loam, 2 To 6 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Summit
Shoulder
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bw--12 to 26 inches; sandy loam
2C--26 to 80 inches; sand

Additional Components

Clontarf and similar soils: 0 to 10 percent of the unit
Egeland and similar soils: 0 to 10 percent of the unit

J8A--Egeland Sandy Loam, 0 To 2 Percent Slopes

Component Description

Egeland and similar soils
Extent: 70 to 90 percent of the unit

Geomorphic description:
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A1--0 to 15 inches; sandy loam
Bw--15 to 40 inches; sandy loam
Bk--40 to 60 inches; sandy loam
C--60 to 80 inches; loamy sand

Additional Components

Clontarf and similar soils: 5 to 15 percent of the unit
Sverdrup and similar soils: 0 to 10 percent of the unit
Arveson and similar soils: 0 to 5 percent of the unit
Hantho and similar soils: 0 to 5 percent of the unit

J8B--Egeland Sandy Loam, 2 To 6 Percent Slopes

Component Description

Egeland and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Summit
Shoulder
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap,A1--0 to 9 inches; sandy loam
Bw--9 to 26 inches; sandy loam
Bk--26 to 39 inches; loamy sand
C--39 to 80 inches; loamy sand

Additional Components

Clontarf and similar soils: 5 to 15 percent of the unit
Sverdrup and similar soils: 0 to 10 percent of the unit
Torning and similar soils: 0 to 5 percent of the unit
Eckman and similar soils: 0 to 5 percent of the unit
Egeland eroded and similar soils: 0 to 5 percent of the unit

J9A--Estelline Silt Loam, 0 To 2 Percent Slopes

Component Description

Estelline and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits over outwash

Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.4 percent
Typical profile:
Ap--0 to 6 inches; silt loam
Bw--6 to 27 inches; silty clay loam
Bk--27 to 37 inches; silt loam
2C--37 to 60 inches; gravelly sand

Additional Components

Thin surface soil and similar soils: 5 to 15 percent of the unit

J10A--Sinai Silty Clay, 0 To 2 Percent Slopes

Component Description

Sinai and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Flat on moraine
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 12 inches; silty clay
Bss--12 to 23 inches; silty clay
Bkss--23 to 42 inches; silty clay
C--42 to 60 inches; silty clay

Additional Components

Fulda and similar soils: 5 to 15 percent of the unit

J10B--Sinai Silty Clay, 2 To 6 Percent Slopes

Component Description

Sinai and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 12 inches; silty clay
Bss--12 to 23 inches; silty clay
Bkss--23 to 42 inches; silty clay
C--42 to 60 inches; silty clay

Additional Components

Fulda and similar soils: 5 to 15 percent of the unit

J11A--Vallers Clay Loam, 0 To 2 Percent Slopes

Component Description

Vallers and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Drainageway on till plain
Flat on till plain
Rim on depression on till plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap,A--0 to 14 inches; clay loam
Bkg--14 to 38 inches; loam
Cg--38 to 80 inches; loam

Additional Components

Parnell, depressional and similar soils: 5 to 15 percent of the unit
Balaton and similar soils: 1 to 10 percent of the unit

J12A--Marysland Loam, 0 To 2 Percent Slopes

Component Description

Marysland and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Drainageway on outwash plain
Rim on depression on outwash plain
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap--0 to 9 inches; loam
Ak--9 to 12 inches; loam
Bkg--12 to 27 inches; loam
2Cg--27 to 80 inches; sand

Additional Components

Arveson and similar soils: 5 to 15 percent of the unit
Marysland, depressional and similar soils: 0 to 5 percent of the unit
Malachy and similar soils: 0 to 5 percent of the unit

J13A--Oldham Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Oldham and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Depression on till plain
Depression on moraine
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 28 inches; silty clay loam
Cg--28 to 80 inches; silty clay loam

Additional Components

Colvin and similar soils: 0 to 10 percent of the unit
Vallers and similar soils: 0 to 10 percent of the unit

J14F--Esmond Loam, 18 To 40 Percent Slopes

Component Description

Esmond and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Summit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 8 inches; loam
Bk--8 to 27 inches; stratified sandy loam to loam to silt loam
C--27 to 80 inches; stratified sandy loam to loam to silt loam

Additional Components

Emrick and similar soils: 5 to 15 percent of the unit
Heimdal and similar soils: 5 to 10 percent of the unit

J15B--Eckman Silt Loam, 2 To 6 Percent Slopes

Component Description

Eckman and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on lake plain
Position on landform:

Backslope
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 13 inches; silt loam
Bw--13 to 22 inches; silt loam
Bk--22 to 30 inches; silt loam
BC,C--30 to 80 inches; silt loam

Additional Components

Eckman, eroded and similar soils: 0 to 10 percent of the unit
Egeland and similar soils: 0 to 10 percent of the unit
Hantho and similar soils: 1 to 10 percent of the unit
Zell and similar soils: 0 to 10 percent of the unit

J16A--Friberg, Depressional, 0 To 2 Percent Slopes

Component Description

Friberg, depressional and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap,A--0 to 23 inches; silt loam
Btg--23 to 47 inches; silty clay loam
Bkg--47 to 60 inches; loam
Cg--60 to 80 inches; loam

Additional Components

Kerkhoven and similar soils: 5 to 15 percent of the unit

J17A--Quam Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Quam, depressional and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Depression on lake plain
Depression on till plain
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
A1,A2--10 to 45 inches; silty clay loam
Cg--45 to 80 inches; silty clay loam

Additional Components

Colvin and similar soils: 0 to 10 percent of the unit
Vallers and similar soils: 0 to 10 percent of the unit

J18A--Malachy Sandy Loam, 1 To 3 Percent Slopes

Component Description

Malachy and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Knoll on outwash plain
Slope range: 1 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
3.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 17 inches; sandy loam
Bk--17 to 28 inches; sandy loam
2C--28 to 80 inches; loamy sand

Additional Components

Arveson and similar soils: 0 to 10 percent of the unit
Better drained soil and similar soils: 0 to 10 percent of the unit
Clontarf and similar soils: 0 to 10 percent of the unit

J19A--Hecla Loamy Fine Sand, 1 To 3 Percent Slopes

Component Description

Hecla and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Flat on outwash plain
Swale on outwash plain
Slope range: 1 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
3.9 feet February August

Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
Ap--0 to 9 inches; loamy fine sand
C--9 to 80 inches; fine sand

Additional Components

Clontarf and similar soils: 5 to 15 percent of the unit
Sverdrup and similar soils: 1 to 10 percent of the unit
Hamar and similar soils: 1 to 5 percent of the unit
Malachy and similar soils: 0 to 5 percent of the unit

J20A--Clontarf Sandy Loam, 1 To 3 Percent Slopes

Component Description

Clontarf and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Flat on outwash plain
Swale on outwash plain
Slope range: 1 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
1.3 feet April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 15 inches; sandy loam
Bw--15 to 25 inches; sandy loam
2C--25 to 80 inches; sand

Additional Components

Hecla and similar soils: 5 to 15 percent of the unit
Arveson and similar soils: 1 to 10 percent of the unit
Better drained soil and similar soils: 1 to 10 percent of the unit

J21A--Hamar Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Hamar and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Drainageway on outwash plain
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 5.0 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,A--0 to 20 inches; loamy fine sand
Cg--20 to 80 inches; loamy fine sand

Additional Components

Less sandy soil and similar soils: 5 to 10 percent of the unit
Arveson and similar soils: 1 to 5 percent of the unit
Hecla and similar soils: 1 to 5 percent of the unit

J22A--Renshaw Loam, 0 To 3 Percent Slopes

Component Description

Renshaw and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Flat on outwash plain
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
Ap--0 to 7 inches; loam
Bw--7 to 15 inches; loam
2Bk--15 to 20 inches; gravelly loamy sand
2C--20 to 60 inches; gravelly loamy sand

Additional Components

Fordtown and similar soils: 5 to 15 percent of the unit
Arvilla and similar soils: 0 to 5 percent of the unit
Fordville and similar soils: 0 to 5 percent of the unit

J23A--Lamoure Silty Clay Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Lamoure and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A1,A2--0 to 27 inches; silty clay loam
Cg1--27 to 34 inches; silty clay loam
Cg2--34 to 60 inches; silt loam

Additional Components

Rauville and similar soils: 5 to 15 percent of the unit
La prairie and similar soils: 1 to 10 percent of the unit

J24F--Buse Loam, 18 To 40 Percent Slopes

Component Description

Buse and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Hill on till plain

Position on landform:
Shoulder
Backslope
Summit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 8 inches; loam
Bk--8 to 37 inches; loam
C--37 to 80 inches; loam

Additional Components

Darnen and similar soils: 5 to 15 percent of the unit
Barnes and similar soils: 4 to 10 percent of the unit

J25A--Rauville Silty Clay Loam, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Rauville and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface March April May
Wet soil moisture status is lowest (depth, months):
1.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
A1,A2--0 to 27 inches; silty clay loam
Cg--27 to 45 inches; silty clay loam
2Cg--45 to 60 inches; stratified gravelly sand to clay loam

Additional Components

Lamoure and similar soils: 5 to 15 percent of the unit

J26B--Darnen Loam, 2 To 6 Percent Slopes

Component Description

Darnen and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Footslope
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Colluvium
Flooding: None
Wet soil moisture status is highest (depth, months):

3.9 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap,A--0 to 24 inches; loam
AB,Bw1--24 to 34 inches; loam
Bw2--34 to 80 inches; loam

Additional Components

Hokans and similar soils: 1 to 10 percent of the unit
Lakepark and similar soils: 1 to 10 percent of the unit

J27A--Hantho Silt Loam, 1 To 3 Percent Slopes

Component Description

Hantho and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Swale on lake plain
Flat on lake plain
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 12 inches; silt loam
Bw--12 to 24 inches; silt loam
Bk,Bkg--24 to 65 inches; silt loam
Cg--65 to 80 inches; silt loam

Additional Components

Eckman and similar soils: 1 to 10 percent of the unit
Quam and similar soils: 1 to 10 percent of the unit
Rondell and similar soils: 0 to 5 percent of the unit
Tara and similar soils: 0 to 5 percent of the unit

J28A--Vallers Clay Loam, 0 To 2 Percent Slopes, Bouldery

Component Description

Vallers, bouldery and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Rim on depression on terrace
Drainageway on terrace
Flat on terrace
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:

A1,A2--0 to 12 inches; clay loam
Bkg--12 to 60 inches; loam
Cg--60 to 80 inches; loam

Additional Components

Parnell, depressional and similar soils: 5 to 15 percent of the unit

J29A--Cathro Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Cathro and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Depression on moraine
Depression on till plain
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 14.4 inches
Content of organic matter in the upper 10 inches: 25.0 percent
Typical profile:
Op--0 to 9 inches; muck
Oa1--9 to 18 inches; muck
A--18 to 50 inches; silt loam
Cg2--50 to 80 inches; clay loam

Additional Components

Colvin and similar soils: 0 to 10 percent of the unit
Vallers and similar soils: 0 to 10 percent of the unit

J30A--Tara Silt Loam, 1 To 3 Percent Slopes

Component Description

Tara and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Swale on till plain
Flat on till plain
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 19 inches; silt loam
Bw--19 to 27 inches; silt loam
2Bk--27 to 33 inches; loam
2C--33 to 80 inches; loam

Additional Components

Balaton and similar soils: 0 to 10 percent of the unit
Byrne and similar soils: 1 to 5 percent of the unit
Quam and similar soils: 0 to 5 percent of the unit

J31B--Arvilla-Sandberg Complex, 2 To 6 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bw--9 to 14 inches; sandy loam
2Bk--14 to 48 inches; gravelly sand
2C--48 to 80 inches; gravelly sand

Sandberg and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
Ap--0 to 8 inches; gravelly sandy loam
Bk--8 to 32 inches; very gravelly sand
C--32 to 80 inches; gravelly sand

Additional Components

Renshaw and similar soils: 5 to 15 percent of the unit
Sioux and similar soils: 5 to 15 percent of the unit
Fordtown and similar soils: 1 to 10 percent of the unit

J32A--Bigstone Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Bigstone and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Depression on moraine
Depression on lake plain
Depression on till plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:

Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
A--10 to 30 inches; silty clay loam
Cg--30 to 80 inches; loam

Additional Components

Urness and similar soils: 5 to 15 percent of the unit
Colvin and similar soils: 0 to 10 percent of the unit
Vallers and similar soils: 0 to 10 percent of the unit

J33D2--Sisseton-Heimdal Complex, 12 To 20 Percent Slopes, Eroded

Component Description

Sisseton, eroded and similar soils
Extent: 60 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 12 to 20 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loam
Bk--8 to 36 inches; stratified sandy loam to loam to silt loam
C--36 to 80 inches; stratified sandy loam to loam to silt loam

Heimdal, eroded and similar soils
Extent: 5 to 15 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Slope range: 12 to 20 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 10 inches; loam
Bw--10 to 21 inches; loam
Bk--21 to 38 inches; stratified sandy loam to loam to silt loam
C--38 to 80 inches; stratified sandy loam to loam to silt loam

Additional Components

Esmond, eroded and similar soils: 5 to 15 percent of the unit
Heimdal and similar soils: 1 to 10 percent of the unit
Emrick and similar soils: 1 to 10 percent of the unit

J34B--Byrne-Buse Complex, 2 To 6 Percent Slopes

Component Description

Byrne and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.9 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap--0 to 10 inches; silt loam
Bw--10 to 23 inches; silt loam
Bk--23 to 28 inches; silt loam
2Bk--28 to 40 inches; loam
2C--40 to 80 inches; loam

Buse and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Shoulder
Summit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 8 inches; loam
Bk--8 to 40 inches; loam
C--40 to 60 inches; loam

Additional Components

Buse, eroded and similar soils: 5 to 15 percent of the unit
Hokans and similar soils: 0 to 10 percent of the unit
Tara and similar soils: 1 to 10 percent of the unit

J35B--Hokans-Buse Complex, 2 To 6 Percent Slopes

Component Description

Hokans and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.9 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 15 inches; loam
Bw--15 to 22 inches; loam
Bk--22 to 40 inches; loam
C--40 to 80 inches; loam

Buse and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Shoulder
Summit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 8 inches; loam
Bk--8 to 40 inches; loam
C--40 to 60 inches; loam

Additional Components

Barnes and similar soils: 5 to 15 percent of the unit
Buse, eroded and similar soils: 5 to 20 percent of the unit
Svea and similar soils: 1 to 10 percent of the unit

J36C2--Buse-Barnes Complex 6 To 12 Percent Slopes, Eroded

Component Description

Buse, eroded and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bk--9 to 34 inches; loam
C--34 to 80 inches; loam

Barnes, eroded and similar soils
Extent: 10 to 30 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:

Summit
        Slope range: 6 to 12 percent
        Surface layer texture: Loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Parent material:
Till
        Flooding: None
        Depth to wet soil moisture status: More than 6.7 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 10.6 inches
        Content of organic matter in the upper 10 inches: 3.5 percent
        Typical profile:
Ap,A--0 to 10 inches; loam
Bw--10 to 22 inches; loam
Bk--22 to 42 inches; loam
C--42 to 80 inches; loam

  Additional Components

     Barnes and similar soils: 5 to 15 percent of the unit
     Buse and similar soils: 5 to 15 percent of the unit
     Darnen and similar soils: 5 to 15 percent of the unit
     Langhei, eroded and similar soils: 0 to 10 percent of the unit

J37D2--Langhei-Barnes Complex, 12 To 20 Percent Slopes,eroded

  Component Description

     Langhei, eroded and similar soils
        Extent: 50 to 70 percent of the unit
        Geomorphic description:
Hill on moraine
        Position on landform:
Summit
Shoulder
        Slope range: 12 to 20 percent
        Surface layer texture: Loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Parent material:
Till
        Flooding: None
        Depth to wet soil moisture status: More than 6.7 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 10.4 inches
        Content of organic matter in the upper 10 inches: 1.2 percent
        Typical profile:
Ap--0 to 6 inches; loam
Bk--6 to 15 inches; loam
C--15 to 60 inches; loam

     Barnes, eroded and similar soils
        Extent: 10 to 20 percent of the unit
        Geomorphic description:
Hill on moraine
        Position on landform:
Summit
        Slope range: 12 to 20 percent
        Surface layer texture: Loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Parent material:
Till
        Flooding: None
        Depth to wet soil moisture status: More than 6.7 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 10.6 inches
        Content of organic matter in the upper 10 inches: 3.5 percent
        Typical profile:
Ap,A--0 to 10 inches; loam
Bw--10 to 22 inches; loam
Bk--22 to 42 inches; loam
C--42 to 80 inches; loam

  Additional Components

Buse, eroded and similar soils: 5 to 15 percent of the unit
Darnen and similar soils: 5 to 15 percent of the unit
Barnes and similar soils: 1 to 10 percent of the unit

J38B--Zell-Eckman Complex, 2 To 6 Percent Slopes

Component Description

Zell and similar soils
Extent: 30 to 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 10 inches; silt loam
Bk--10 to 43 inches; silt loam
C--43 to 80 inches; silt loam

Eckman and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 15 inches; silt loam
Bw--15 to 32 inches; silt loam
Bk--32 to 42 inches; silt loam
C--42 to 80 inches; silt loam

Additional Components

Zell, eroded and similar soils: 5 to 15 percent of the unit
Egeland and similar soils: 0 to 10 percent of the unit
Hantho and similar soils: 1 to 10 percent of the unit

J38C2--Zell-Eckman Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Zell, eroded and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits

Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bk--9 to 28 inches; silt loam
C--28 to 80 inches; silt loam

Eckman, eroded and similar soils
Extent: 10 to 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 8 inches; silt loam
Bw--8 to 31 inches; silt loam
Bk--31 to 50 inches; silt loam
C--50 to 80 inches; silt loam

Additional Components

Zell and similar soils: 5 to 25 percent of the unit
Hantho and similar soils: 5 to 15 percent of the unit
Eckman and similar soils: 1 to 10 percent of the unit
Egeland and similar soils: 0 to 10 percent of the unit

J39A--Udorthents, Shallow (sanitary Landfill)

Additional Components

Udorthents: 100 percent of the unit

J40A--Foxlake Silty Clay, 0 To 2 Percent Slopes

Component Description

Foxlake and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Flat on till plain
Drainageway on till plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 23 inches; silty clay
Bkg--23 to 39 inches; silty clay
Cg--39 to 80 inches; silty clay

Additional Components

Audubon and similar soils: 1 to 10 percent of the unit
Calcareous soil and similar soils: 0 to 10 percent of the unit

Depressional soil and similar soils: 1 to 10 percent of the unit

J41A--Urness Mucky Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Urness and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Depression on till plain
Depression on moraine
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 15.0 percent
Typical profile:
Ap--0 to 9 inches; mucky silt loam
Cg--9 to 32 inches; mucky silt loam
2Cg--32 to 80 inches; silty clay loam

Additional Components

Bigstone and similar soils: 5 to 15 percent of the unit
Colvin and similar soils: 0 to 10 percent of the unit
Vallers and similar soils: 0 to 10 percent of the unit

J42C--Sandberg-Arvilla Complex, 6 To 12 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 50 to 70 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Summit
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 10 inches; gravelly sandy loam
Bk--10 to 22 inches; gravelly sand
C--22 to 80 inches; gravelly sand

Arvilla and similar soils
Extent: 25 to 35 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
A--0 to 9 inches; sandy loam
Bw--9 to 14 inches; sandy loam
2Bk--14 to 48 inches; gravelly sand
2C--48 to 80 inches; gravelly sand

Additional Components

Everts and similar soils: 5 to 15 percent of the unit

J43A--Quam, Cathro, And Urness Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Quam, depressional and similar soils
Extent: 0 to 85 percent of the unit
Geomorphic description:
Depression on till plain
Depression on moraine
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
A--0 to 33 inches; silt loam
Cg--33 to 50 inches; silty clay loam
2Cg--50 to 60 inches; clay loam

Cathro and similar soils
Extent: 0 to 85 percent of the unit
Geomorphic description:
Depression on lake plain
Depression on till plain
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 20.0 inches
Content of organic matter in the upper 10 inches: 25.0 percent
Typical profile:
Oa1--0 to 20 inches; muck
Oa2--20 to 34 inches; muck
A--34 to 40 inches; loam
Cg--40 to 80 inches; loam

Urness and similar soils
Extent: 0 to 85 percent of the unit
Geomorphic description:
Depression on till plain

Depression on lake plain
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 15.0 percent
Typical profile:
A--0 to 20 inches; mucky silt loam
Cg--20 to 45 inches; mucky silt loam
2Cg--45 to 60 inches; loam

Additional Components

Colvin and similar soils: 0 to 10 percent of the unit
Vallers and similar soils: 0 to 10 percent of the unit

J44B--Esmond-Heimdal Complex, 2 To 6 Percent Slopes

Component Description

Esmond and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 10 inches; loam
Bk--10 to 30 inches; stratified sandy loam to loam to silt loam
C--30 to 80 inches; stratified sandy loam to loam to silt loam

Heimdal and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap--0 to 10 inches; loam
Bw--10 to 22 inches; loam
Bk--22 to 42 inches; stratified sandy loam to loam to silt loam
C--42 to 80 inches; stratified sandy loam to loam to silt loam

Additional Components

Esmond, eroded and similar soils: 5 to 15 percent of the unit
Emrick and similar soils: 1 to 10 percent of the unit

J44C2--Esmond-Heimdal Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Esmond, eroded and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loam
Bk--8 to 30 inches; stratified sandy loam to loam to silt loam
C--30 to 80 inches; stratified sandy loam to loam to silt loam

Heimdal, eroded and similar soils
Extent: 10 to 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
Ap--0 to 7 inches; loam
Bw--7 to 16 inches; loam
Bk--16 to 36 inches; stratified sandy loam to loam to silt loam
C--36 to 80 inches; stratified sandy loam to loam to silt loam

Additional Components

Esmond and similar soils: 5 to 25 percent of the unit
Heimdal and similar soils: 5 to 25 percent of the unit
Emrick and similar soils: 1 to 10 percent of the unit
Sisseton, eroded and similar soils: 0 to 10 percent of the unit

J45F--Sandberg Sandy Loam, 12 To 40 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Backslope
Shoulder
Summit
Slope range: 12 to 40 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained

Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A1,A2--0 to 12 inches; sandy loam
Bk--12 to 28 inches; gravelly sand
C--28 to 80 inches; gravelly sand

Additional Components

Everts and similar soils: 5 to 15 percent of the unit
Arvilla and similar soils: 0 to 10 percent of the unit
Sioux and similar soils: 1 to 10 percent of the unit

J46B--Byrne Silt Loam, 2 To 4 Percent Slopes

Component Description

Byrne and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Summit
Shoulder
Backslope
Slope range: 2 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.9 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 3.9 percent
Typical profile:
Ap--0 to 8 inches; silt loam
Bw--8 to 23 inches; silt loam
Bk1--23 to 28 inches; silt loam
2Bk--28 to 72 inches; loam
2C--72 to 80 inches; loam

Additional Components

Hokans and similar soils: 0 to 15 percent of the unit
Buse and similar soils: 1 to 10 percent of the unit
Quam and similar soils: 0 to 5 percent of the unit

J47A--Swenoda Sandy Loam, Moderately Wet, 1 To 3 Percent Slopes

Component Description

Swenoda and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Swale on outwash plain
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over lacustrine deposits
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):

More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 17 inches; sandy loam
Bw--17 to 29 inches; sandy loam
2C--29 to 80 inches; silt loam

Additional Components

Clontarf and similar soils: 5 to 15 percent of the unit
Egeland and similar soils: 0 to 10 percent of the unit

J48A--Bigstone And Parnell Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Bigstone and similar soils
Extent: 0 to 85 percent of the unit
Geomorphic description:
Depression on moraine
Depression on till plain
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
A1--0 to 18 inches; silty clay loam
A2--18 to 48 inches; silty clay loam
2Cg--48 to 80 inches; loam

Parnell and similar soils
Extent: 0 to 85 percent of the unit
Geomorphic description:
Depression on lake plain
Depression on till plain
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A1,A2--0 to 22 inches; silty clay loam
Btg--22 to 55 inches; silty clay
BCg--55 to 80 inches; silty clay loam

Additional Components

Colvin and similar soils: 0 to 15 percent of the unit
Vallers and similar soils: 0 to 15 percent of the unit

J49A--Lakepark-Parnell, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Lakepark and similar soils

Extent: 40 to 60 percent of the unit
Geomorphic description:
Flat on moraine
Drainageway on moraine
Slope range: 1 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 5.9 percent
Typical profile:
Ap--0 to 8 inches; loam
A--8 to 27 inches; loam
Bg--27 to 41 inches; loam
Cg--41 to 80 inches; loam

Parnell, depressional and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A1,A2--0 to 22 inches; silty clay loam
Btg--22 to 55 inches; silty clay
BCg--55 to 80 inches; silty clay loam

Additional Components

Emrick and similar soils: 5 to 10 percent of the unit
Vallers and similar soils: 5 to 10 percent of the unit

J50A--Balaton-Tara Complex, 1 To 3 Percent Slopes

Component Description

Balaton and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Knoll on lake plain
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 13 inches; loam
ABk,Bk--13 to 31 inches; loam
C--31 to 80 inches; loam

Tara and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Flat on lake plain
Swale on lake plain
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 22 inches; silty clay loam
Bw--22 to 38 inches; silt loam
2C--38 to 80 inches; loam

Additional Components

Mcintosh and similar soils: 5 to 15 percent of the unit
Better drained soil and similar soils: 1 to 10 percent of the unit
Winger and similar soils: 1 to 10 percent of the unit

J51A--Bearden-Quam, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Bearden and similar soils
Extent: 50 to 70 percent of the unit
Geomorphic description:
Rim on depression on lake plain
Drainageway on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 16 inches; silty clay loam
Bk--16 to 37 inches; silt loam
Cg--37 to 80 inches; stratified silt loam to silty clay loam

Quam, depressional and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine deposits
Flooding: None

Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
Ap,A--0 to 28 inches; silty clay loam
Bg--28 to 48 inches; silty clay loam
2Cg--48 to 80 inches; silty clay loam

Additional Components

Rondell and similar soils: 5 to 15 percent of the unit
Winger and similar soils: 0 to 5 percent of the unit

J52A--Rondell Silty Clay Loam, 1 To 3 Percent Slopes

Component Description

Rondell and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Knoll on lake plain
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
Ap--0 to 9 inches; silty clay loam
Bk--9 to 30 inches; silty clay loam
C--30 to 80 inches; silty clay loam

Additional Components

Zell and similar soils: 5 to 15 percent of the unit
Bearden and similar soils: 1 to 10 percent of the unit

J53A--Ortonville Loam, 1 To 3 Percent Slopes

Component Description

Ortonville and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Knoll on moraine
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
Ap--0 to 8 inches; loam
Bk--8 to 24 inches; stratified sandy loam to loam to silt loam

C--24 to 80 inches; stratified sandy loam to loam to silt loam

Additional Components

Better drained soil and similar soils: 5 to 15 percent of the unit
Vallers and similar soils: 1 to 10 percent of the unit

J54A--Marysland Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Marysland, depressional and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Depression on outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
1.8 feet August
Ponding does not occur (months):
January February May June July August September October November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 6.3 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
Ap,Ak--0 to 19 inches; loam
Bkg--19 to 23 inches; sandy loam
2Cg--23 to 80 inches; sand

Additional Components

Marysland and similar soils: 5 to 15 percent of the unit

J55A--Sedgeville Loam, Channeled, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Sedgeville and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Flat on flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 7.7 percent
Typical profile:
A--0 to 8 inches; loam
Bg--8 to 34 inches; coarse sandy loam
2Cg--34 to 80 inches; gravelly loamy coarse sand

Additional Components

Frequently flooded soil and similar soils: 5 to 15 percent of the unit

J56A--Winger-Balaton-Parnell, Depressional, Complex, 0 To 3 Percent Slopes

Component Description

Winger and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Drainageway on lake plain
Rim on depression on lake plain
Flat on lake plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap--0 to 7 inches; silty clay loam
Ak--7 to 22 inches; silt loam
Bkg--22 to 27 inches; silt loam
Cg1--27 to 31 inches; silt loam
2Cg2--31 to 80 inches; loam

Balaton and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Knoll on lake plain
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 13 inches; loam
ABk,Bk--13 to 31 inches; loam
C--31 to 80 inches; loam

Parnell, depressional and similar soils
Extent: 10 to 30 percent of the unit
Geomorphic description:
Depression on lake plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 8.0 percent

Typical profile:
A1,A2--0 to 22 inches; silty clay loam
Btg--22 to 55 inches; silty clay
BCg--55 to 80 inches; silty clay loam

Additional Components

Colvin and similar soils: 1 to 10 percent of the unit
Vallers and similar soils: 1 to 10 percent of the unit

J57A--Balaton Loam, 1 To 3 Percent Slopes

Component Description

Balaton and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Knoll on till plain
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 13 inches; loam
ABk,Bk--13 to 31 inches; loam
C--31 to 80 inches; loam

Additional Components

Better drained soil and similar soils: 1 to 10 percent of the unit
Tara and similar soils: 0 to 10 percent of the unit
Vallers and similar soils: 1 to 10 percent of the unit

J58B--Torning-Egeland Complex, 2 To 6 Percent Slopes

Component Description

Torning and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 8 inches; fine sandy loam
Bk--8 to 30 inches; fine sandy loam
C--30 to 80 inches; fine sand

Egeland and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Backslope
Summit

Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
Bw1,2--8 to 30 inches; sandy loam
Bw3--30 to 35 inches; loamy sand
Bk--35 to 48 inches; loamy fine sand
C--48 to 80 inches; loamy fine sand

Additional Components

Clontarf and similar soils: 5 to 15 percent of the unit
Sverdrup and similar soils: 0 to 10 percent of the unit

J59A--Urness Mucky Silty Clay Loam, Sandy Substratum, Ponded, 0 To 1 Percent Slopes

Component Description

Urness, sandy substratum and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Depression on outwash plain
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine deposits over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 15.0 percent
Typical profile:
A1,A2--0 to 34 inches; mucky silty clay loam
Cg--34 to 66 inches; mucky silty clay loam
2Cg--66 to 80 inches; sand

Additional Components

Marysland and similar soils: 5 to 15 percent of the unit

J60B--Hattie-Audubon Complex, 1 To 4 Percent Slopes

Component Description

Hattie and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Summit
Shoulder
Slope range: 1 to 4 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August

Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 8 inches; silty clay
Bwss--8 to 15 inches; silty clay
Bkss--15 to 22 inches; silty clay
C--22 to 80 inches; silty clay

Audubon and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Backslope
Summit
Slope range: 1 to 4 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 14 inches; silty clay
Bkss--14 to 36 inches; silty clay
C--36 to 80 inches; silty clay

Additional Components

Foxlake and similar soils: 5 to 15 percent of the unit

J60C--Hattie-Audubon Complex, 4 To 10 Percent Slopes

Component Description

Hattie and similar soils
Extent: 50 to 70 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Summit
Shoulder
Slope range: 4 to 10 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
Ap--0 to 9 inches; silty clay
Bkss--9 to 19 inches; silty clay
C--19 to 80 inches; silty clay

Audubon and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Backslope
Summit
Slope range: 4 to 10 percent
Surface layer texture: Silty clay

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
Ap--0 to 8 inches; silty clay
Bkss--8 to 34 inches; silty clay
C--34 to 80 inches; silty clay

Additional Components

Foxlake and similar soils: 5 to 15 percent of the unit

J61A--Svea Loam, 1 To 3 Percent Slopes, Bouldery

Component Description

Svea, bouldery and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Flat on terrace
Swale on terrace
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A1,A2--0 to 10 inches; loam
Bw--10 to 23 inches; clay loam
Bk--23 to 60 inches; loam
C--60 to 80 inches; loam

Additional Components

Vallers, bouldery and similar soils: 1 to 10 percent of the unit
Parnell, depressional and similar soils: 0 to 10 percent of the unit

J62C--Buse-Barnes Complex, 2 To 12 Percent Slopes, Very Bouldery

Component Description

Buse, very bouldery and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on terrace
Position on landform:
Shoulder
Summit
Slope range: 3 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches

Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
A--0 to 8 inches; loam
Bk--8 to 24 inches; loam
BC,C--24 to 80 inches; loam

Barnes, very bouldery and similar soils
Extent: 20 to 30 percent of the unit
Geomorphic description:
Hill on terrace
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A1,A2--0 to 15 inches; loam
Bw--15 to 22 inches; loam
Bk--22 to 50 inches; loam
C--50 to 80 inches; loam

Additional Components

Hokans and similar soils: 10 to 20 percent of the unit
Svea, bouldery and similar soils: 5 to 15 percent of the unit
Darnen and similar soils: 1 to 10 percent of the unit

J62F--Buse-Barnes Complex, 12 To 40 Percent Slopes, Very Bouldery

Component Description

Buse, very bouldery and similar soils
Extent: 40 to 60 percent of the unit
Geomorphic description:
Hill on terrace
Position on landform:
Backslope
Shoulder
Summit
Slope range: 12 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
A--0 to 7 inches; loam
Bk--7 to 44 inches; loam
C--44 to 80 inches; loam

Barnes, very bouldery and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on terrace
Position on landform:
Summit
Backslope
Slope range: 12 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till

Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
A--0 to 12 inches; loam
Bw--12 to 19 inches; loam
Bk--19 to 33 inches; loam
C--33 to 80 inches; loam

Additional Components

Darnen and similar soils: 5 to 15 percent of the unit

J63A--Ortonville-Vallers-Parnell, Depressional Complex, 0 To 3 Percent Slopes

Component Description

Ortonville and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Knoll on moraine
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
Ap--0 to 8 inches; loam
Bk--8 to 24 inches; stratified sandy loam to loam to silt loam
C--24 to 80 inches; stratified sandy loam to loam to silt loam

Vallers and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Drainageway on moraine
Flat on moraine
Rim on depression on moraine
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap--0 to 10 inches; loam
Bkg--10 to 29 inches; loam
Cg--29 to 80 inches; loam

Parnell, depressional and similar soils
Extent: 15 to 25 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:

Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A1,A2--0 to 22 inches; silty clay loam
Btg--22 to 55 inches; silty clay
BCg--55 to 80 inches; silty clay loam

J64A--Quam Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Quam and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Drainageway on till plain
Flat on till plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine deposits
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 10.2 percent
Typical profile:
Ap--0 to 9 inches; silty clay loam
A--9 to 60 inches; silty clay loam
Bg--60 to 68 inches; silty clay loam
2Cg--68 to 80 inches; loam

Additional Components

Colvin and similar soils: 0 to 10 percent of the unit
Quam, depressional and similar soils: 0 to 10 percent of the unit

J65A--Shakopee Silty Clay, 0 To 2 Percent Slopes

Component Description

Shakopee and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Drainageway on outwash plain
Rim on depression on outwash plain
Flat on outwash plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine deposits over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:

Ap--0 to 9 inches; silty clay
A--9 to 15 inches; silty clay
Bkg--15 to 38 inches; silty clay
2C--38 to 80 inches; sand

Additional Components

Depressional soil and similar soils: 5 to 15 percent of the unit

J66A--Emrick Loam, 1 To 3 Percent Slopes

Component Description

Emrick and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Flat on moraine
Swale on moraine
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 15 inches; loam
Bw--15 to 25 inches; loam
Bk--25 to 36 inches; stratified sandy loam to loam to silt loam
C--36 to 80 inches; stratified sandy loam to loam to silt loam

Additional Components

Lakepark and similar soils: 5 to 15 percent of the unit
Heimdal and similar soils: 1 to 10 percent of the unit

J67A--Fordtown Loam, 1 To 3 Percent Slopes

Component Description

Fordtown and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Flat on outwash plain
Swale on outwash plain
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
3.9 feet April
Wet soil moisture status is lowest (depth, months):
4.9 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A2--0 to 30 inches; loam
Bw--30 to 36 inches; loam
2C--36 to 80 inches; gravelly loamy sand

Additional Components

Renshaw and similar soils: 5 to 10 percent of the unit
Spottswood and similar soils: 0 to 10 percent of the unit

J68A--Kerkhoven-Friberg, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Kerkhoven and similar soils
Extent: 45 to 65 percent of the unit
Geomorphic description:
Flat on moraine
Drainageway on moraine
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap--0 to 10 inches; loam
A--10 to 35 inches; loam
Bg--35 to 53 inches; loam
Bkg--53 to 63 inches; loam
Cg--63 to 80 inches; loam

Friberg, depressional and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Depression on moraine
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap,A--0 to 23 inches; silt loam
Btg--23 to 47 inches; silty clay loam
Bkg--47 to 60 inches; loam
Cg--60 to 80 inches; loam

Additional Components

Emrick and similar soils: 5 to 15 percent of the unit

L33B--Kandiyohi Clay, 2 To 5 Percent Slopes

Component Description

Kandiyohi and similar soils
Extent: 80 to 90 percent of the unit
Geomorphic description:
Hill on till plain
Position on landform:
Shoulder
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:

Lacustrine deposits over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap--0 to 10 inches; clay
Bw--10 to 23 inches; clay
Bkg--23 to 64 inches; clay loam
BCg--64 to 80 inches; clay loam

Additional Components

Cosmos and similar soils: 5 to 15 percent of the unit
Okoboji and similar soils: 1 to 10 percent of the unit

L34A--Cosmos Silty Clay, 0 To 2 Percent Slopes

Component Description

Cosmos and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Flat on till plain
Drainageway on till plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 15 inches; silty clay
Btg--15 to 30 inches; silty clay
Btkg--30 to 36 inches; silty clay
2Bkg--36 to 80 inches; clay loam

Additional Components

Kandiyohi and similar soils: 5 to 15 percent of the unit
Okoboji and similar soils: 1 to 10 percent of the unit

W--Water

Additional Components

Water: 100 percent of the unit

Todd County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

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Soil Descriptions - Non Technical

26--Aazdahl Clay Loam

Component Description

Aazdahl and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 18 inches; clay loam
H3--18 to 60 inches; clay loam

34--Parnell Silty Clay Loam

Component Description

Parnell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 60 inches; silty clay

46--Borup Loam

Component Description

Borup and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 25 inches; very fine sandy loam
H3--25 to 60 inches; loamy very fine sand

47--Colvin Silty Clay Loam

Component Description

Colvin and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 26 inches; silty clay loam
H3--26 to 60 inches; silty clay loam

51--La Prairie Silt Loam

Component Description

La prairie and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June
Wet soil moisture status is highest (depth, months):
3.5 feet March April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 6 inches; silt loam
H2--6 to 30 inches; silt loam
H3--30 to 43 inches; silty clay loam
H4--43 to 60 inches; silt loam

56--Fargo Silty Clay Loam

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet November
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 8 inches; silty clay loam
H2--8 to 16 inches; silty clay
H3--16 to 60 inches; silty clay

57--Fargo Silty Clay

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet November
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 6.3 percent
Typical profile:
H1--0 to 7 inches; silty clay
H2--7 to 23 inches; silty clay
H3--23 to 60 inches; silty clay

58--Kittson Loam

Component Description

Kittson and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September

Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 24 inches; fine sandy loam
H3--24 to 34 inches; clay loam
H4--34 to 60 inches; clay loam

60--Glyndon Loam

Component Description

Glyndon and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 25 inches; loam
H3--25 to 60 inches; very fine sandy loam

67A--Bearden Silt Loam, 0 To 2 Percent Slopes

Component Description

Bearden and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 29 inches; silt loam
H3--29 to 60 inches; silt loam

67B--Bearden Silty Clay Loam, 2 To 6 Percent Slopes

Component Description

Bearden and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August

September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.3 percent
Typical profile:
H1--0 to 7 inches; silty clay loam
H2--7 to 17 inches; silty clay loam
H3--17 to 60 inches; silty clay loam

108--Mcintosh Silt Loam

Component Description

Mcintosh and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.6 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 27 inches; silt loam
H3--27 to 60 inches; clay loam

141--Egeland Loam

Component Description

Egeland and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 19 inches; sandy loam
H3--19 to 41 inches; loamy sand
H4--41 to 60 inches; loam

171B--Formdale Clay Loam, 1 To 6 Percent Slopes

Component Description

Formdale and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 18 inches; clay loam
H3--18 to 42 inches; clay loam

H4--42 to 60 inches; clay loam

184--Hamerly Clay Loam

Component Description

Hamerly and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 32 inches; clay loam
H3--32 to 60 inches; clay loam

236--Vallers Clay Loam

Component Description

Vallers and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Drainageway
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 24 inches; clay loam
H3--24 to 60 inches; clay loam

245B--Lohnes Sandy Loam, 1 To 6 Percent Slopes

Component Description

Lohnes and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 2.0 percent

Typical profile:
H1--0 to 14 inches; sandy loam
H2--14 to 60 inches; coarse sand

276--Oldham Silty Clay Loam

Component Description

Oldham and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August September October November December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 44 inches; silty clay loam
H3--44 to 60 inches; silty clay loam

293--Swenoda Loam

Component Description

Swenoda and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 23 inches; loam
H2--23 to 31 inches; sandy loam
H3--31 to 60 inches; silt loam

343--Wheatville Silt Loam

Component Description

Wheatville and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):

More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 35 inches; very fine sandy loam
H3--35 to 60 inches; silty clay

344--Quam Silt Loam

Component Description

Quam and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
H1--0 to 14 inches; silt loam
H2--14 to 37 inches; silty clay loam
H3--37 to 60 inches; silty clay loam

371--Clontarf Sandy Loam

Component Description

Clontarf and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 29 inches; sandy loam
H3--29 to 60 inches; sand

418--Lamoure Silty Clay Loam

Component Description

Lamoure and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent

Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
September October
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 24 inches; silty clay loam
H2--24 to 55 inches; silty clay loam
H3--55 to 60 inches; silty clay loam

434--Perella Silty Clay Loam

Component Description

Perella and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot July
Ponding is deepest (depth, months):
0.5 foot March April May
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 29 inches; silty clay loam
H3--29 to 60 inches; silty clay loam

437E--Buse Clay Loam, 18 To 35 Percent Slopes

Component Description

Buse and similar soils
Extent: 100 percent of the unit
Slope range: 18 to 35 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 3 inches; clay loam
H2--3 to 60 inches; clay loam

450--Rauville Silt Loam

Component Description

Rauville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February November December
Flooding is most likely (frequency, months):
Frequent March April May June July August
September October
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.2 foot January February August
September December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 33 inches; silt loam
H2--33 to 60 inches; silty clay loam

494B--Darnen Loam, 1 To 6 Percent Slopes

Component Description

Darnen and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 24 inches; loam
H2--24 to 37 inches; loam
H3--37 to 60 inches; loam

582--Roliss Clay Loam

Component Description

Roliss and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Flat
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 17 inches; clay loam

H3--17 to 22 inches; clay loam
H4--22 to 60 inches; clay loam

642--Clearwater Silty Clay Loam

Component Description

Clearwater and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Drainageway
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 7 inches; silty clay loam
H2--7 to 17 inches; silty clay
H3--17 to 60 inches; silty clay loam

646B--Peever Clay, 2 To 6 Percent Slopes

Component Description

Peever and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; clay
H2--10 to 23 inches; clay
H3--23 to 36 inches; clay
H4--36 to 60 inches; clay

698--Doran Clay Loam

Component Description

Doran and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None

Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 16 inches; clay
H3--16 to 60 inches; clay loam

814--Hamerly-Lindaas Clay Loams

Component Description

Hamerly and similar soils
Extent: 55 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 32 inches; clay loam
H3--32 to 60 inches; clay loam

Lindaas and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August September October November December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 32 inches; clay
H3--32 to 60 inches; silty clay loam

816--Fargo Clay, Saline

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Flat
Slope range: 0 to 1 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November December

Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 10 inches; clay
H2--10 to 15 inches; clay
H3--15 to 60 inches; clay

821--Doran-Lindaas Silty Clay Loams

Component Description

Doran and similar soils
Extent: 50 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 16 inches; clay
H3--16 to 60 inches; clay loam

Lindaas and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 26 inches; clay
H3--26 to 60 inches; clay loam

822B--Peever-Buse Complex, 2 To 6 Percent Slopes

Component Description

Peever and similar soils
Extent: 55 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; clay
H2--10 to 36 inches; clay
H3--36 to 60 inches; clay

Buse and similar soils
Extent: 30 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 60 inches; clay loam

900--Hamerly-Aazdahl-Lindaas Complex

Component Description

Hamerly and similar soils
Extent: 40 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 11 inches; clay loam
H2--11 to 27 inches; clay loam
H3--27 to 60 inches; clay loam

Aazdahl and similar soils
Extent: 30 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; clay loam
H2--15 to 20 inches; clay loam
H3--20 to 60 inches; clay loam

Lindaas and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Drainageway
Depression
Slope range: 0 to 1 percent

Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 19 inches; silty clay loam
H2--19 to 28 inches; silty clay
H3--28 to 60 inches; silty clay loam

915B--Formdale-Buse Clay Loams, 2 To 6 Percent Slopes

Component Description

Formdale and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 17 inches; clay loam
H3--17 to 60 inches; clay loam

Buse and similar soils
Extent: 30 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 60 inches; clay loam

915C2--Buse-Formdale Clay Loams, 6 To 14 Percent Slopes, Eroded

Component Description

Buse and similar soils
Extent: 60 percent of the unit
Slope range: 6 to 14 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 60 inches; clay loam

Formdale and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 14 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 25 inches; clay loam
H3--25 to 60 inches; clay loam

922--Hamerly-Parnell Complex

Component Description

Hamerly and similar soils
Extent: 60 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 28 inches; clay loam
H3--28 to 60 inches; clay loam

Parnell and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Drainageway
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 39 inches; silty clay loam
H3--39 to 60 inches; clay loam

948--Mcintosh-Lindaas Complex

Component Description

Mcintosh and similar soils

Extent: 60 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 14 inches; silt loam
H2--14 to 27 inches; silt loam
H3--27 to 60 inches; loam

Lindaas and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Drainageway
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 33 inches; silty clay
H3--33 to 60 inches; silt loam

1020--Udorthents, Sloping

Component Description

Udorthents and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 25 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

1030--Udorthents-Pits, Complex

Component Description

Pits
Extent: 50 percent of the unit
Depth to wet soil moisture status: More than 5.0 feet all year

Udorthents
Extent: 50 percent of the unit
Slope range: 0 to 5 percent
Flooding: None

1356--Water, Miscellaneous

Additional Components

Water, miscellaneous: 100 percent of the unit

1916--Lindaas Clay Loam

Component Description

Lindaas and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Drainageway
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 25 inches; clay
H3--25 to 60 inches; clay loam

1918--Croke Loam

Component Description

Croke and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 4.6 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 25 inches; very fine sandy loam
H3--25 to 60 inches; silty clay

1933--Bearden-Lindaas Complex

Component Description

Bearden and similar soils
Extent: 55 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December

Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 18 inches; silt loam
H3--18 to 60 inches; silt loam

Lindaas and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Drainageway
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 26 inches; silty clay
H3--26 to 60 inches; clay loam

1940--Quam Silty Clay Loam, Ponded

Component Description

Quam and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.2 foot July August
Ponding is deepest (depth, months):
0.5 foot March April May November
December
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
H1--0 to 30 inches; silty clay loam
H2--30 to 40 inches; silty clay loam
H3--40 to 60 inches; clay loam

1947--Doran Silty Clay Loam, Loamy Substratum

Component Description

Doran and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April May
Wet soil moisture status is lowest (depth, months):

More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 16 inches; silty clay
H3--16 to 40 inches; silty clay loam
H4--40 to 60 inches; very fine sandy loam

1948--Fargo-Lindaas Silty Clay Loams

Component Description

Fargo and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet November
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 11 inches; silty clay loam
H2--11 to 16 inches; silty clay
H3--16 to 60 inches; silty clay

Lindaas and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Drainageway
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 8 inches; silty clay loam
H2--8 to 31 inches; clay
H3--31 to 60 inches; silty clay

1949--Gardena Loam

Component Description

Gardena and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 60 inches; very fine sandy loam

1950--Ludden Silty Clay Loam

Component Description

Ludden and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June July
Wet soil moisture status is highest (depth, months):
At the surface March April July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot May June July
Ponding is deepest (depth, months):
0.3 foot March April
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 33 inches; silty clay
H3--33 to 60 inches; silty clay loam

W--Water

Additional Components

Water: 100 percent of the unit

Wabasha County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Wadena County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Soil Descriptions - Non Technical

GP--Pits, Gravel-Udipsamments Complex

Component Description

Pits, gravel
Extent: 50 to 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Stream terrace
Parent material:
Sandy and gravelly outwash

Gravel pits are areas that have been mined for gravel or sand. This map unit is actively being mined or is an abandoned pit. Because of the variability of this component in this map unit, interpretation for specific uses are not available. Onsite investigation is needed.

Udipsamments
Extent: 15 to 30 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Moraine
Parent material:
Outwash

Udipsamments are areas of soil that support plant growth and are areas of the pit that have been reclaimed or abandoned. Because of the variability of this component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

L5A--Delft, Overwash-Delft Complex, 1 To 4 Percent Slopes

Component Description

Delft, overwash and similar soils
Extent: 40 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 12 inches; loam
A--12 to 37 inches; loam
Bg--37 to 47 inches; clay loam
Cg--47 to 80 inches; loam

Delft and similar soils
Extent: 30 to 55 percent of the unit

Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 37 inches; loam
Bg--37 to 50 inches; clay loam
Cg--50 to 60 inches; loam

L13A--Klossner Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Klossner, drained and similar soils
Extent: 65 to 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 50.0 percent
Typical profile:
Op,Oa--0 to 26 inches; muck
2A1--26 to 36 inches; mucky silty clay loam
2A2--36 to 48 inches; silty clay loam
2Cg--48 to 80 inches; loam

Additional Components

Mineral soil, drained and similar soils: 5 to 20 percent of the unit

L14A--Houghton Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Houghton, drained and similar soils
Extent: 65 to 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Op--0 to 10 inches; muck
Oa--10 to 80 inches; muck

L15A--Klossner, Okoboji And Glencoe Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Klossner, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

Okoboji, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium or lacustrine sediments over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
A1--0 to 10 inches; mucky silty clay loam
A2--10 to 52 inches; silty clay loam
Bg--52 to 60 inches; silty clay loam

Glencoe, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine

Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
A--0 to 42 inches; silty clay loam
Bg--42 to 50 inches; clay loam
Cg--50 to 60 inches; loam

L16A--Muskego, Blue Earth And Houghton Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Muskego, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

Blue earth, ponded and similar soils
Extent: 0 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Coprogenous earth
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
A--0 to 50 inches; silt loam
Cg--50 to 60 inches; silt loam

Houghton, ponded and similar soils
Extent: 0 to 100 percent of the unit

Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
Oa--0 to 80 inches; muck

L26B--Shorewood Silty Clay Loam, 3 To 6 Percent Slopes

Component Description

Shorewood and similar soils
Extent: 85 to 95 percent of the unit
Geomorphic description:
Hill on moraine
Hill on lake plain
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; silty clay loam
Bt--17 to 39 inches; silty clay
2BCg,2Cg--39 to 60 inches; loam

L36A--Hamel, Overwash-Hamel Complex, 1 To 4 Percent Slopes

Component Description

Hamel, overwash and similar soils
Extent: 40 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet August
Ponding: None

Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 13 inches; loam
A--13 to 29 inches; clay loam
Btg--29 to 50 inches; clay loam
Cg--50 to 80 inches; loam

Hamel and similar soils
Extent: 30 to 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 24 inches; loam
Btg--24 to 46 inches; clay loam
Cg--46 to 80 inches; loam

L40B--Angus-Kilkenny Complex, 2 To 6 Percent Slopes

Component Description

Angus and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

Kilkenny and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained

Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.7 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 11 inches; clay loam
Bt--11 to 35 inches; clay loam
2Bk,2C--35 to 80 inches; loam

L41C2--Lester-Kilkenny Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 40 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Kilkenny, eroded and similar soils
Extent: 35 to 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; clay loam
Bt--9 to 53 inches; clay loam
2BC,2C--53 to 80 inches; loam

L41D2--Lester-Kilkenny Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils

Extent: 40 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Kilkenny, eroded and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 12 to 18 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; clay loam
Bt--9 to 53 inches; clay loam
2BC,2C--53 to 80 inches; loam

L41E--Lester-Kilkenny Complex, 18 To 25 Percent Slopes

Component Description

Lester and similar soils
Extent: 40 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam

Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

Kilkenny and similar soils
Extent: 35 to 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
A--0 to 7 inches; clay loam
Bt--7 to 31 inches; clay loam
2Bk,2C--31 to 80 inches; loam

L48A--Derrynane, Overwash-Derrynane Complex, 1 To 4 Percent Slopes

Component Description

Derrynane, overwash and similar soils
Extent: 40 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 4 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Colluvium or glaciofluvial sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A1--0 to 16 inches; clay loam
A2,AE,Bt--16 to 48 inches; clay loam
Btg--48 to 67 inches; clay loam
Cg--67 to 80 inches; loam

Derrynane and similar soils
Extent: 30 to 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium or glaciofluvial sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May

Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A1--0 to 19 inches; clay loam
A2--19 to 39 inches; silty clay
Bg,2Bg--39 to 65 inches; clay loam
2Cg--65 to 80 inches; loam

L49A--Klossner Soils, Depressional, 0 To 1 Percent Slopes

Component Description

Klossner, surface drained and similar soils
Extent: 50 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November
December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

Klossner, drained and similar soils
Extent: 0 to 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 50.0 percent
Typical profile:
Op,Oa--0 to 26 inches; muck
2A1--26 to 36 inches; mucky silty clay loam
2A2--36 to 48 inches; silty clay loam
2Cg--48 to 80 inches; loam

Additional Components

Mineral soil, drained and similar soils: 5 to 25 percent of the unit

L50A--Houghton And Muskego Soils, Depressional, 0 To 1 Percent Slopes

Component Description

Houghton, surface drained and similar soils
Extent: 20 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
Oa--0 to 80 inches; muck

Muskego, surface drained and similar soils
Extent: 20 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding does not occur (months):
January February July August September October November December
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

L51C2--Gladek Silt Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Gladek, eroded and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on lake plain
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; silt loam
Bt--10 to 39 inches; silt loam
C--39 to 80 inches; silt loam

L56A--Muskego And Klossner Soils, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Muskego, frequently flooded and similar soils
Extent: 30 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

Klossner, frequently flooded and similar soils
Extent: 30 to 100 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent

Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

L57A--Medo Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Medo, drained and similar soils
Extent: 65 to 85 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 14.3 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Op,Oa--0 to 27 inches; muck
2A--27 to 35 inches; mucky loam
2Bg--35 to 39 inches; sandy clay loam
2Cg--39 to 80 inches; gravelly loamy coarse sand

Additional Components

Mineral soil, drained and similar soils: 5 to 20 percent of the unit

L63A--Klossner Muck, Lake Plain, Depressional, 0 To 1 Percent Slopes

Component Description

Klossner and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Op,Oa--0 to 25 inches; muck
2A--25 to 40 inches; silty clay loam
2Cg--40 to 80 inches; silty clay loam

L64A--Tadkee-Tadkee, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Tadkee and similar soils
Extent: 20 to 70 percent of the unit
Geomorphic description:
Beach on moraine
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Beach sand over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 4.3 percent
Typical profile:
A--0 to 6 inches; loamy fine sand
Bg--6 to 34 inches; sand
2Cg--34 to 80 inches; loam

Tadkee, depressional and similar soils
Extent: 20 to 70 percent of the unit
Geomorphic description:
Beach on moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Beach sand over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 12.1 percent
Typical profile:
A--0 to 6 inches; mucky loamy fine sand
Bg--6 to 27 inches; sand
2Cg--27 to 80 inches; loam

L73A--Blue Earth Mucky Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Blue earth and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Lake plain
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Coprogenous earth over till
Flooding: None

Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
Ap--0 to 10 inches; mucky silty clay loam
Cg--10 to 68 inches; mucky silty clay loam
2Cg--68 to 80 inches; loam

L74A--Estherville Sandy Loam, Terrace, 0 To 2 Percent Slopes

Component Description

Estherville and similar soils
Extent: 80 to 90 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw1--13 to 18 inches; sandy loam
2Bw2--18 to 23 inches; loamy coarse sand
2C--23 to 60 inches; gravelly coarse sand

L75B--Barrington Silt Loam, 2 To 6 Percent Slopes

Component Description

Barrington and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on lake plain
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 15 inches; silt loam
Bt--15 to 33 inches; silt loam
C--33 to 60 inches; stratified loamy very fine sand to silt loam

L76B--Dickinson Fine Sandy Loam, 1 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on delta
Hill on outwash plain
Position on landform:
Summit
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A--0 to 14 inches; fine sandy loam
Bw--14 to 39 inches; fine sandy loam
C--39 to 60 inches; loamy fine sand

L77A--Brownton Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Brownton and similar soils
Extent: 65 to 90 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Rims of depressions
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 22 inches; silty clay loam
Bg--22 to 38 inches; silty clay
2Cg--38 to 60 inches; loam

Additional Components

Marna and similar soils: 5 to 20 percent of the unit

L78A--Canisteo Clay Loam, 0 To 2 Percent Slopes

Component Description

Canisteo and similar soils
Extent: 55 to 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and rims of depressions
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):

0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Bkg--18 to 39 inches; loam
Cg--39 to 80 inches; loam

L79B--Clarion Loam, 2 To 5 Percent Slopes

Component Description

Clarion and similar soils
Extent: 50 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 14 inches; loam
Bw--14 to 33 inches; loam
Bk--33 to 60 inches; loam

Additional Components

Clarion, eroded and similar soils: 10 to 40 percent of the unit

L80C2--Lester Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 65 to 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

L80D2--Lester Loam, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 60 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

L81A--Cordova Clay Loam, 0 To 2 Percent Slopes

Component Description

Cordova and similar soils
Extent: 75 to 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Btg--18 to 38 inches; clay loam
Cg--38 to 80 inches; loam

L82A--Marna Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Marna and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Moraine
Lake plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May

Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 20 inches; silty clay loam
Bg--20 to 32 inches; clay
2Bg--32 to 41 inches; clay loam
2Bkg--41 to 60 inches; loam

L83A--Webster Clay Loam, 0 To 2 Percent Slopes

Component Description

Webster and similar soils
Extent: 50 to 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 19 inches; clay loam
Bg--19 to 26 inches; clay loam
BCg,Cg--26 to 60 inches; loam

Additional Components

Glencoe and similar soils: 0 to 20 percent of the unit

L84A--Glencoe Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Glencoe and similar soils
Extent: 75 to 100 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap--0 to 10 inches; clay loam
A,ABg--10 to 35 inches; clay loam
Bg--35 to 48 inches; loam
Cg--48 to 60 inches; loam

L85A--Nicollet Clay Loam, 1 To 3 Percent Slopes

Component Description

Nicollet and similar soils
Extent: 70 to 95 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 17 inches; clay loam
Bw,Bg--17 to 33 inches; clay loam
Bg--33 to 36 inches; clay loam
Cg--36 to 60 inches; loam

L86A--Madelia Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Madelia and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 19 inches; silty clay loam
Bg--19 to 37 inches; silty clay loam
Cg--37 to 60 inches; silt loam

L87A--Kingston Silty Clay Loam, 1 To 3 Percent Slopes

Component Description

Kingston and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:

Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 16 inches; silty clay loam
Bw--16 to 25 inches; silty clay loam
C--25 to 60 inches; silt loam

L88A--Lura Silty Clay, Depressional, 0 To 1 Percent Slopes

Component Description

Lura and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay
A--10 to 58 inches; clay
Bg--58 to 72 inches; silty clay

L89A--Guckeen Silty Clay Loam, 0 To 3 Percent Slopes

Component Description

Guckeen and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Lake plain
Moraine
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 15 inches; silty clay loam
Bw--15 to 24 inches; silty clay loam
2Bw--24 to 30 inches; clay loam
2Cg--30 to 60 inches; loam

L90A--Le Sueur Clay Loam, 0 To 3 Percent Slopes

Component Description

Le sueur and similar soils
Extent: 70 to 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,AB--0 to 17 inches; clay loam
Bt--17 to 37 inches; clay loam
Bk--37 to 46 inches; loam
C--46 to 80 inches; loam

L91A--Mazaska Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Mazaska and similar soils
Extent: 75 to 95 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 15 inches; silty clay loam
Btg--15 to 42 inches; clay
Bkg--42 to 80 inches; loam

L92A--Darfur Loam, 0 To 2 Percent Slopes

Component Description

Darfur and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained

Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 6.3 percent
Typical profile:
Ap,A--0 to 9 inches; loam
A,AB--9 to 19 inches; loam
Bg--19 to 31 inches; fine sandy loam
Cg--31 to 60 inches; stratified fine sand to loamy fine sand to fine sandy loam

L93A--Muskego Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Muskego and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material/coprogenous earth over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 15.6 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Op,Oa--0 to 16 inches; muck
Lco--16 to 76 inches; coprogenous earth
Cg--76 to 80 inches; loam

L94A--Lowlein Fine Sandy Loam, Terrace, 0 To 3 Percent Slopes

Component Description

Lowlein and similar soils
Extent: 60 to 85 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over lacustrine silty sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 18 inches; fine sandy loam
Bw1--18 to 27 inches; fine sandy loam

Bw2--27 to 46 inches; stratified loamy sand to fine sandy loam
2Bw--46 to 72 inches; silt loam
2C--72 to 80 inches; silt loam

Additional Components

Linder and similar soils: 10 to 25 percent of the unit

L95E--Hawick Gravelly Coarse Sandy Loam, 12 To 25 Percent Slopes

Component Description

Hawick and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Shoulder
Backslope
Slope range: 12 to 25 percent
Surface layer texture: Gravelly coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; gravelly coarse sandy loam
AC--7 to 10 inches; gravelly loamy coarse sand
C--10 to 60 inches; gravelly coarse sand

L96B--Estherville-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 40 to 65 percent of the unit
Geomorphic description:
Hill on terrace
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw1--13 to 18 inches; sandy loam
2Bw2--18 to 23 inches; loamy coarse sand
2C--23 to 60 inches; gravelly coarse sand

Hawick and similar soils
Extent: 25 to 40 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Shoulder
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw,C--7 to 80 inches; gravelly coarse sand

L97C--Hawick-Estherville Complex, 6 To 12 Percent Slopes

Component Description

Hawick and similar soils
Extent: 45 to 70 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Shoulder
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; gravelly sandy loam
Bw,C--7 to 80 inches; gravelly coarse sand

Estherville and similar soils
Extent: 25 to 40 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw1--13 to 18 inches; sandy loam
2Bw2--18 to 23 inches; loamy coarse sand
2C--23 to 60 inches; gravelly coarse sand

L98A--Crippin-Nicollet Complex, 1 To 3 Percent Slopes

Component Description

Crippin and similar soils
Extent: 40 to 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:

Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,AB--0 to 15 inches; loam
Bw--15 to 27 inches; loam
C--27 to 60 inches; loam

Nicollet and similar soils
Extent: 30 to 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 17 inches; clay loam
Bw,Bg--17 to 33 inches; clay loam
Bg--33 to 36 inches; clay loam
Cg--36 to 60 inches; loam

L99B--Clarion-Swanlake Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 50 to 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 14 inches; loam
Bw--14 to 33 inches; loam
Bk--33 to 60 inches; loam

Swanlake and similar soils
Extent: 15 to 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; loam
Bk--9 to 43 inches; loam
C--43 to 60 inches; loam

L100B--Clarion-Estherville Complex, 2 To 6 Percent Slopes

Component Description

Clarion and similar soils
Extent: 40 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 14 inches; loam
Bw--14 to 33 inches; loam
Bk--33 to 60 inches; loam

Estherville and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw1--13 to 18 inches; sandy loam

2Bw2--18 to 23 inches; loamy coarse sand
2C--23 to 60 inches; gravelly coarse sand

L101C2--Omsrud-Hawick-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Omsrud, eroded and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 19 inches; clay loam
Bk--19 to 36 inches; loam
C--36 to 80 inches; loam

Hawick and similar soils
Extent: 25 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; gravelly sandy loam
Bw,C--7 to 80 inches; gravelly coarse sand

Storden, eroded and similar soils
Extent: 15 to 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

L101D2--Omsrud-Hawick-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Omsrud, eroded and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 19 inches; clay loam
Bk--19 to 36 inches; loam
C--36 to 80 inches; loam

Hawick and similar soils
Extent: 25 to 35 percent of the unit
Geomorphic description:
Hill on moraine
Slope range: 12 to 18 percent
Surface layer texture: Gravelly coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; gravelly coarse sandy loam
Bw,C--7 to 80 inches; gravelly coarse sand

Storden, eroded and similar soils
Extent: 15 to 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

L102C2--Omsrud-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Omsrud, eroded and similar soils
Extent: 40 to 70 percent of the unit
Geomorphic description:
Hill on moraine

Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 19 inches; clay loam
Bk--19 to 36 inches; loam
C--36 to 80 inches; loam

Storden, eroded and similar soils
Extent: 20 to 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

Additional Components

Omsrud and similar soils: 10 to 20 percent of the unit

L102D2--Omsrud-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Omsrud, eroded and similar soils
Extent: 40 to 75 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 19 inches; clay loam
Bk--19 to 36 inches; loam
C--36 to 80 inches; loam

Storden, eroded and similar soils
Extent: 15 to 25 percent of the unit

Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

Additional Components

Omsrud and similar soils: 10 to 25 percent of the unit

L103A--Fieldon-Canisteo Complex, 0 To 2 Percent Slopes

Component Description

Fieldon and similar soils
Extent: 45 to 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats with deltaic sediments
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Deltaic sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap,A,AB--0 to 19 inches; loam
Bg,Bw--19 to 37 inches; fine sandy loam
C,Cg--37 to 60 inches; stratified fine sand to loamy fine sand

Canisteo and similar soils
Extent: 30 to 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and rims of depressions
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Bkg--18 to 39 inches; loam

Cg--39 to 80 inches; loam

L105C2--Lester-Hawick Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 30 to 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Hawick and similar soils
Extent: 25 to 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; gravelly sandy loam
Bw,C--7 to 80 inches; gravelly coarse sand

L105D2--Lester-Hawick Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 30 to 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:

Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Hawick and similar soils
Extent: 30 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Gravelly coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 7 inches; gravelly coarse sandy loam
Bw,C--7 to 80 inches; gravelly coarse sand

L106C2--Lester-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 50 to 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Storden, eroded and similar soils
Extent: 15 to 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam

C--55 to 80 inches; loam

L106D2--Lester-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 50 to 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Storden, eroded and similar soils
Extent: 15 to 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

L107A--Canisteo-Glencoe, Depressional Complex, 0 To 2 Percent Slopes

Component Description

Canisteo and similar soils
Extent: 30 to 70 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and rims of depressions
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Bkg--18 to 39 inches; loam
Cg--39 to 80 inches; loam

Glencoe and similar soils
Extent: 15 to 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap--0 to 10 inches; clay loam
A,ABg--10 to 35 inches; clay loam
Bg--35 to 48 inches; loam
Cg--48 to 60 inches; loam

L108A--Cordova-Rolfe, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Cordova and similar soils
Extent: 50 to 75 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Btg--18 to 38 inches; clay loam
Cg--38 to 80 inches; loam

Rolfe and similar soils
Extent: 15 to 35 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:

Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 12 inches; silt loam
E--12 to 20 inches; silt loam
Btg--20 to 35 inches; silty clay
2Bt--35 to 51 inches; clay loam
2Cg--51 to 60 inches; loam

L109A--Marna-Barbert, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Marna and similar soils
Extent: 55 to 75 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 20 inches; silty clay loam
Bg--20 to 32 inches; clay
2Bg--32 to 41 inches; clay loam
2Bkg--41 to 60 inches; loam

Barbert and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
Ap--0 to 7 inches; silt loam
E--7 to 17 inches; silt loam
Btg--17 to 43 inches; clay
C--43 to 60 inches; silty clay loam

L110E--Lester-Ridgeton Complex, 18 To 25 Percent Slopes

Component Description

Lester and similar soils
Extent: 45 to 65 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Backslope
Shoulder
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam
BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

Ridgeton and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Backslope
Footslope
Slope range: 12 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Colluvium over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2,A3--0 to 32 inches; loam
Bw--32 to 40 inches; loam
C1,C2--40 to 80 inches; loam

L110F--Lester-Ridgeton Complex, 25 To 45 Percent Slopes

Component Description

Lester and similar soils
Extent: 45 to 65 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Shoulder
Backslope
Slope range: 25 to 45 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:

A--0 to 6 inches; loam
Bt--6 to 25 inches; clay loam
C--25 to 60 inches; loam

Ridgeton and similar soils
Extent: 20 to 40 percent of the unit
Geomorphic description:
Escarpment on moraine
Position on landform:
Backslope
Footslope
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Colluvium over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A1,A2,A3--0 to 32 inches; loam
Bw--32 to 40 inches; loam
C1,C2--40 to 80 inches; loam

L111A--Nicollet Silty Clay Loam, 1 To 3 Percent Slopes

Component Description

Nicollet and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay loam
Bw--10 to 31 inches; clay loam
Bk--31 to 42 inches; loam
C--42 to 80 inches; loam

L112A--Webster Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Webster and similar soils
Extent: 75 to 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):

0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A,AB--0 to 24 inches; silty clay loam
Bg--24 to 45 inches; clay loam
Cg--45 to 80 inches; loam

L113B--Reedslake Loam, 2 To 5 Percent Slopes

Component Description

Reedslake and similar soils
Extent: 65 to 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 12 inches; loam
Bt--12 to 26 inches; clay loam
Bk--26 to 48 inches; loam
C--48 to 80 inches; loam

L114A--Hanlon Fine Sandy Loam, 0 To 3 Percent Slopes, Rarely Flooded

Component Description

Hanlon, rarely flooded and similar soils
Extent: 70 to 95 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 24 inches; fine sandy loam
AB--24 to 52 inches; fine sandy loam
Bw1--52 to 57 inches; fine sandy loam
Bw2,C--57 to 80 inches; stratified fine sand to loamy fine sand

to fine sandy loam

L115A--Brownton-Lura, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Brownton and similar soils
Extent: 50 to 60 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Flats and rims of depressions
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 22 inches; silty clay loam
Bg--22 to 38 inches; silty clay
2Cg--38 to 60 inches; loam

Lura and similar soils
Extent: 30 to 40 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
Ap--0 to 10 inches; silty clay
A--10 to 58 inches; clay
Bg--58 to 72 inches; silty clay

L116A--Le Sueur-Lerdal Complex, 1 To 3 Percent Slopes

Component Description

Le sueur and similar soils
Extent: 35 to 55 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till

Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,AB--0 to 17 inches; clay loam
Bt--17 to 37 inches; clay loam
Bk--37 to 46 inches; loam
C--46 to 80 inches; loam

Lerdal and similar soils
Extent: 30 to 50 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.6 feet November
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
Ap--0 to 8 inches; clay loam
E--8 to 12 inches; clay loam
Bt,Btg--12 to 41 inches; silty clay loam
Bk--41 to 80 inches; loam

L117C2--Omsrud Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Omsrud, eroded and similar soils
Extent: 55 to 75 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
Ap--0 to 9 inches; loam
Bw--9 to 19 inches; clay loam
Bk--19 to 36 inches; loam
C--36 to 80 inches; loam

Additional Components

Omsrud and similar soils: 5 to 20 percent of the unit

L118A--Rushriver Fine Sandy Loam, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Rushriver, frequently flooded and similar soils

Extent: 70 to 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 1 percent
Surface layer texture: Stratified sandy loam to fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 41 inches; stratified sandy loam to fine sandy loam
C--41 to 80 inches; stratified fine sand to loamy very fine sand
to silt loam

L119B--Angus Loam, 2 To 5 Percent Slopes

Component Description

Angus and similar soils
Extent: 50 to 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

L120A--Good Thunder Silty Clay Loam, 0 To 3 Percent Slopes

Component Description

Good thunder and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):

2.5 feet April May
Wet soil moisture status is lowest (depth, months):
5.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 15 inches; silty clay loam
Bt--15 to 32 inches; silty clay
C--32 to 80 inches; silt loam

L121B--Clarion Clay Loam, 2 To 5 Percent Slopes

Component Description

Clarion and similar soils
Extent: 70 to 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap,A--0 to 13 inches; clay loam
Bw--13 to 37 inches; clay loam
C--37 to 80 inches; loam

Additional Components

Guckeen and similar soils: 10 to 20 percent of the unit

L122B--Reedslake-Estherville Complex, 2 To 6 Percent Slopes

Component Description

Reedslake and similar soils
Extent: 45 to 65 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 12 inches; loam
Bt--12 to 26 inches; clay loam
Bk--26 to 48 inches; loam
C--48 to 80 inches; loam

Estherville and similar soils
Extent: 15 to 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw1--13 to 18 inches; sandy loam
2Bw2--18 to 23 inches; loamy coarse sand
2C--23 to 60 inches; gravelly coarse sand

L123A--Bellville Sandy Loam, 0 To 2 Percent Slopes

Component Description

Belleville and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Beach on moraine
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap--0 to 11 inches; sandy loam
Bg--11 to 27 inches; loamy sand
2Bg--27 to 48 inches; loam
2Cg--48 to 80 inches; loam

Additional Components

Granby and similar soils: 10 to 20 percent of the unit

L124A--Glencoe Mucky Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Glencoe mucky and similar soils
Extent: 80 to 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None

Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
Ap--0 to 10 inches; mucky clay loam
A--10 to 29 inches; clay loam
Bg--29 to 42 inches; loam
Cg--42 to 60 inches; loam

L125A--Hanlon, Rarely Flooded-Coland, Occasionally Flooded, Complex, 0 To 3 Percent Slopes

Component Description

Hanlon, rarely flooded and similar soils
Extent: 35 to 65 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February July August September October November December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 24 inches; fine sandy loam
AB--24 to 52 inches; fine sandy loam
Bw1--52 to 57 inches; fine sandy loam
Bw2,C--57 to 80 inches; stratified fine sand to loamy fine sand to fine sandy loam

Coland, occasionally flooded and similar soils
Extent: 25 to 40 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 25 inches; silty clay loam

AC,Cg1--25 to 54 inches; loam
Cg2--54 to 60 inches; sandy loam

Additional Components

Minneopa, rarely flooded and similar soils: 10 to 25 percent of the unit

L126A--Coland Silty Clay Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Coland, occasionally flooded and similar soils
Extent: 65 to 90 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 25 inches; silty clay loam
AC,Cg1--25 to 54 inches; loam
Cg2--54 to 60 inches; sandy loam

L127A--Coland Silty Clay Loam, Channeled, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Coland, frequently flooded and similar soils
Extent: 65 to 90 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A1--0 to 12 inches; silty clay loam
A2--12 to 30 inches; loam
A3--30 to 55 inches; stratified fine sandy loam to loam
AB,Bg--55 to 80 inches; fine sandy loam

L128A--Mazaska-Rolfe, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Mazaska and similar soils
Extent: 50 to 70 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 15 inches; silty clay loam
Btg--15 to 42 inches; clay
Bkg--42 to 80 inches; loam

Rolfe and similar soils
Extent: 20 to 35 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 12 inches; silt loam
E--12 to 20 inches; silt loam
Btg--20 to 35 inches; silty clay
2Bt--35 to 51 inches; clay loam
2Cg--51 to 60 inches; loam

L129B--Terril Loam, 2 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 80 to 95 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Footslope
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April

Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A1--0 to 27 inches; loam
A2,BA--27 to 40 inches; loam
BW--40 to 63 inches; loam
C--63 to 80 inches; loam

L130A--Okoboji Mucky Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Okoboji, mucky and similar soils
Extent: 60 to 85 percent of the unit
Geomorphic description:
Moraine
Lake plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
Ap,A--0 to 13 inches; mucky silty clay loam
A--13 to 35 inches; silty clay loam
Bg--35 to 60 inches; silty clay loam

Additional Components

Okoboji and similar soils: 10 to 20 percent of the unit

M-W--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

Miscellaneous water map units are not naturally occuring water areas. They are constructed and include; sewage lagoons, storm water sediment basins with a permanent pool of water, and aquaculture ponds. This map unit is not soil, no interpretations assigned.

U3B--Udorthents, Loamy (cut And Fill Land), 1 To 6 Percent Slopes

Component Description

Udorthents (cut and fill land)
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Slope range: 0 to 6 percent
Parent material:
Variable loamy material
Flooding: None

The Udorthents component, consists primarily of cut or fill operations to the landscape to level and or fill areas for

development. The cut and or fill material is dominatly loamy soil material. Up to 30 percent of this map unit is covered by impervious surfaces. The majority of the area has been disturbed by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

W--Water

Component Description

Water
Extent: 100 percent of the unit

This mapunit consists of natural occuring bodies of water or water that has been impounded by structures in natural waterways. They range in size from 1.5 acres to tens of thousands of acres. This map unit is not soil, no interpretations assigned.

Washington/Ramsey Counties, Minnesota

FIELD OFFICE TECHNICAL GUIDE Sec. IIA
DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

8B--Sparta Loamy Sand, 1 To 6 Percent Slopes

Component Description

Sparta and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.5 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 38 inches; loamy sand
H2--38 to 60 inches; sand

27A--Dickinson Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 14 inches; fine sandy loam
H2--14 to 40 inches; fine sandy loam
H3--40 to 60 inches; fine sand

27B--Dickinson Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 14 inches; fine sandy loam
H2--14 to 40 inches; fine sandy loam
H3--40 to 60 inches; fine sand

31F--Storden Loam, 20 To 35 Percent Slopes

Component Description

Storden and similar soils
Extent: 90 percent of the unit
Slope range: 20 to 35 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 60 inches; loam

35--Blue Earth Mucky Silt Loam

Component Description

Blue earth and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Relict lakebed
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 10 inches; mucky silt loam
H2--10 to 60 inches; mucky silt loam

41B--Estherville Sandy Loam, 1 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; sandy loam
H2--13 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly coarse sand

69B--Fedji Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Fedji and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 12 inches; loamy fine sand
H2--12 to 35 inches; loamy fine sand
H3--35 to 42 inches; clay loam
H4--42 to 60 inches; clay loam

84--Brownton Silty Clay Loam

Component Description

Brownton and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 38 inches; silty clay
H3--38 to 60 inches; silty clay loam

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; clay loam
H2--22 to 36 inches; clay loam
H3--36 to 60 inches; loam

101B--Truman Silt Loam, 1 To 4 Percent Slopes

Component Description

Truman and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; silt loam
H2--14 to 34 inches; silt loam
H3--34 to 60 inches; silt loam

102B--Clarion Loam, 1 To 4 Percent Slopes

Component Description

Clarion and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 32 inches; loam
H3--32 to 60 inches; loam

112--Harps Clay Loam

Component Description

Harps and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Rim
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 18 inches; clay loam
H2--18 to 36 inches; clay loam
H3--36 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 23 inches; clay loam
H2--23 to 33 inches; clay loam
H3--33 to 60 inches; loam

114--Glencoe Clay Loam

Component Description

Glencoe and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 28 inches; clay loam
H2--28 to 46 inches; clay loam
H3--46 to 60 inches; clay loam

118--Crippin Loam

Component Description

Crippin and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 33 inches; loam
H3--33 to 60 inches; loam

128A--Grogan Silt Loam, 0 To 2 Percent Slopes

Component Description

Grogan and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 36 inches; silt loam
H3--36 to 60 inches; stratified very fine sandy loam to silt loam

128B--Grogan Silt Loam, 2 To 6 Percent Slopes

Component Description

Grogan and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 15 inches; silt loam
H2--15 to 36 inches; silt loam
H3--36 to 60 inches; stratified very fine sandy loam to silt loam

130--Nicollet Loam

Component Description

Nicollet and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 19 inches; loam
H2--19 to 34 inches; clay loam
H3--34 to 60 inches; loam

134--Okoboji Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.4 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 34 inches; silty clay loam
H2--34 to 48 inches; silty clay loam
H3--48 to 60 inches; silty clay loam

136--Madelia Silty Clay Loam

Component Description

Madelia and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 25 inches; silty clay loam
H3--25 to 60 inches; silt loam

140--Spicer Silty Clay Loam

Component Description

Spicer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 30 inches; silty clay loam
H3--30 to 60 inches; silt loam

160--Fieldon Loam

Component Description

Fieldon and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.3 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 32 inches; fine sandy loam
H3--32 to 60 inches; loamy fine sand

178--Granby Loamy Sand

Component Description

Granby and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 26 inches; loamy sand
H2--26 to 32 inches; loamy sand
H3--32 to 60 inches; loamy sand

181--Litchfield Loamy Fine Sand

Component Description

Litchfield and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 21 inches; loamy fine sand
H2--21 to 40 inches; stratified fine sand to loamy fine sand
H3--40 to 60 inches; fine sand

183--Dassel Fine Sandy Loam

Component Description

Dassel and similar soils
Extent: 90 percent of the unit
Geomorphic description:

Depression
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
1.8 feet August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 9.0 percent
Typical profile:
H1--0 to 27 inches; fine sandy loam
H2--27 to 37 inches; sandy loam
H3--37 to 60 inches; loamy sand

197--Kingston Silty Clay Loam

Component Description

Kingston and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 22 inches; silty clay loam
H3--22 to 60 inches; silt loam

222B--Lasa Loamy Fine Sand, 1 To 6 Percent Slopes

Component Description

Lasa and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 18 inches; loamy fine sand
H2--18 to 60 inches; fine sand

227--Lemond Loam

Component Description

Lemond and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; loam
H2--18 to 28 inches; sandy loam
H3--28 to 60 inches; sand

229--Waldorf Silty Clay Loam

Component Description

Waldorf and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 23 inches; silty clay loam
H2--23 to 38 inches; silty clay
H3--38 to 60 inches; silty clay loam

247--Linder Sandy Loam

Component Description

Linder and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.3 feet April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 18 inches; sandy loam
H2--18 to 33 inches; sandy loam
H3--33 to 60 inches; coarse sand

255--Mayer Loam

Component Description

Mayer and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 19 inches; loam
H2--19 to 38 inches; loam
H3--38 to 60 inches; gravelly coarse sand

269--Millington Clay Loam, Occasionally Flooded

Component Description

Millington and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 16 inches; clay loam
H2--16 to 38 inches; clay loam
H3--38 to 60 inches; stratified loam to clay loam

281--Darfur Fine Sandy Loam

Component Description

Darfur and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 23 inches; fine sandy loam
H2--23 to 36 inches; fine sandy loam
H3--36 to 60 inches; loamy fine sand

282--Hanska Loam

Component Description

Hanska and similar soils
Extent: 90 percent of the unit
Geomorphic description:

Flat
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; loam
H2--18 to 30 inches; sandy loam
H3--30 to 60 inches; sand

327A--Dickman Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 15 inches; sandy loam
H2--15 to 20 inches; loamy sand
H3--20 to 60 inches; sand

327B--Dickman Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dickman and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 15 inches; sandy loam
H2--15 to 20 inches; loamy sand
H3--20 to 60 inches; sand

336--Delft Loam

Component Description

Delft and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Drainageway
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April

Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 29 inches; loam
H2--29 to 47 inches; clay loam
H3--47 to 60 inches; clay loam

362--Millington Clay Loam, Frequently Flooded

Component Description

Millington and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 36 inches; clay loam
H2--36 to 60 inches; stratified sandy loam to silty clay loam

392--Biscay Loam

Component Description

Biscay and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; loam
H2--22 to 32 inches; loam
H3--32 to 36 inches; sandy loam
H4--36 to 60 inches; stratified gravelly coarse sand to gravelly loamy sand

421B--Ves Loam, 1 To 4 Percent Slopes

Component Description

Ves and similar soils
Extent: 90 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 18 inches; loam
H3--18 to 25 inches; loam
H4--25 to 60 inches; loam

423--Seaforth Loam

Component Description

Seaforth and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 24 inches; loam
H3--24 to 60 inches; loam

446--Normania Loam

Component Description

Normania and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 24 inches; clay loam
H3--24 to 32 inches; clay loam
H4--32 to 60 inches; loam

487--Hoopeston Fine Sandy Loam

Component Description

Hoopeston and similar soils
Extent: 90 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

1.3 feet April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 18 inches; fine sandy loam
H2--18 to 32 inches; fine sandy loam
H3--32 to 60 inches; fine sand

517--Shandep Clay Loam

Component Description

Shandep and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
1.8 feet August
Ponding does not occur (months):
January February May June July August September October
November December
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 22 inches; clay loam
H2--22 to 40 inches; clay loam
H3--40 to 60 inches; loamy sand

539--Palms Muck

Component Description

Palms and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 18.5 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 31 inches;
H2--31 to 49 inches; silty clay loam
H3--49 to 60 inches; silty clay loam

562--Knoke Silty Clay Loam

Component Description

Knoke and similar soils
Extent: 90 percent of the unit
Geomorphic description:

Depression
        Slope range: 0 to 1 percent
        Surface layer texture: Silty clay loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Very poorly drained
        Flooding: None
        Wet soil moisture status is highest (depth, months):
At the surface   March April
        Wet soil moisture status is lowest (depth, months):
2.0 feet   February August
        Ponding is shallowest (depth, months):
0.5 foot   March
        Ponding is deepest (depth, months):
1.0 foot   April
        Available water capacity to a depth of 60 inches: 12.9 inches
        Content of organic matter in the upper 10 inches: 8.5 percent
        Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 50 inches; silty clay loam
H3--50 to 60 inches; silty clay loam

575--Nishna Silty Clay Loam

  Component Description

     Nishna and similar soils
        Extent: 90 percent of the unit
        Geomorphic description:
Flood plain
        Slope range: 0 to 2 percent
        Surface layer texture: Silty clay loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Poorly drained
        Flooding: None
        Wet soil moisture status is highest (depth, months):
0.5 foot   April May
        Wet soil moisture status is lowest (depth, months):
2.6 feet   February August
        Ponding: None
        Available water capacity to a depth of 60 inches: 7.3 inches
        Content of organic matter in the upper 10 inches: 5.0 percent
        Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 60 inches; silty clay loam

639B--Ridgeport Sandy Loam, 1 To 6 Percent Slopes

  Component Description

     Ridgeport and similar soils
        Extent: 90 percent of the unit
        Slope range: 1 to 6 percent
        Surface layer texture: Sandy loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Somewhat excessively drained
        Flooding: None
        Depth to wet soil moisture status: More than 5.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 3.7 inches
        Content of organic matter in the upper 10 inches: 2.5 percent
        Typical profile:
H1--0 to 16 inches; sandy loam
H2--16 to 33 inches; sandy loam
H3--33 to 60 inches; gravelly coarse sand

654--Revere Clay Loam

  Component Description

     Revere and similar soils
        Extent: 90 percent of the unit
        Geomorphic description:
Flat
        Slope range: 0 to 2 percent

Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; clay loam
H2--22 to 36 inches; clay loam
H3--36 to 60 inches; loam

668--Corwith Silt Loam

Component Description

Corwith and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; silt loam
H2--17 to 27 inches; silt loam
H3--27 to 60 inches; loamy very fine sand

789B2--Grogan-Lasa Variant Complex, 2 To 6 Percent Slopes, Eroded

Component Description

Grogan and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 36 inches; silt loam
H3--36 to 60 inches; stratified fine sand to loamy fine sand

Lasa variant and similar soils
Extent: 40 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent

Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 60 inches; stratified fine sand to loamy fine sand

789C2--Lasa Variant-Grogan Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lasa variant and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 34 inches; loamy fine sand
H3--34 to 60 inches; stratified fine sand to loamy fine sand

Grogan and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 32 inches; fine sandy loam
H3--32 to 60 inches; very fine sandy loam

790B--Grogan-Dickinson Complex, 1 To 4 Percent Slopes

Component Description

Grogan and similar soils
Extent: 50 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 18 inches; loam
H2--18 to 35 inches; silt loam
H3--35 to 60 inches; very fine sandy loam

Dickinson and similar soils
Extent: 40 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
H1--0 to 14 inches; fine sandy loam
H2--14 to 36 inches; fine sandy loam
H3--36 to 60 inches; fine sand

887B--Clarion-Swanlake Loams, 1 To 4 Percent Slopes

Component Description

Clarion and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 30 inches; loam
H3--30 to 60 inches; loam

Swanlake and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 60 inches; loam

909C2--Bold-Truman Silt Loams, 5 To 12 Percent Slopes, Eroded

Component Description

Bold and similar soils
Extent: 50 percent of the unit
Slope range: 5 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 13.2 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 6 inches; silt loam
H2--6 to 60 inches; silt loam

Truman and similar soils
Extent: 40 percent of the unit
Slope range: 5 to 12 percent

Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 20 inches; silt loam
H3--20 to 60 inches; silt loam

920B2--Clarion-Estherville Complex, 2 To 6 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 45 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 28 inches; loam
H3--28 to 60 inches; loam

Estherville and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 20 inches; sandy loam
H3--20 to 60 inches; gravelly coarse sand

920C2--Clarion-Estherville Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 50 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 16 inches; loam

H2--16 to 32 inches; loam
H3--32 to 60 inches; loam

Estherville and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 21 inches; sandy loam
H3--21 to 60 inches; coarse sand

921B2--Clarion-Storden Loams, 3 To 6 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 65 percent of the unit
Slope range: 3 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 21 inches; loam
H3--21 to 60 inches; loam

Storden and similar soils
Extent: 25 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 36 inches; loam
H3--36 to 60 inches; loam

921C2--Clarion-Storden Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Clarion and similar soils
Extent: 65 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August

September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 32 inches; loam
H3--32 to 60 inches; loam

Storden and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 37 inches; loam
H3--37 to 60 inches; loam

929--Fieldon-Canisteo Complex

Component Description

Fieldon and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 38 inches; fine sandy loam
H3--38 to 60 inches; loamy fine sand

Canisteo and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 20 inches; loam
H3--20 to 32 inches; loam
H4--32 to 60 inches; loam

954B2--Ves-Storden Loams, 3 To 6 Percent Slopes, Eroded

Component Description

Ves and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 30 inches; loam
H3--30 to 36 inches; loam
H4--36 to 60 inches; loam

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 34 inches; loam
H3--34 to 60 inches; loam

954C2--Storden-Ves Loams, 6 To 15 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 45 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 36 inches; loam
H3--36 to 60 inches; loam

Ves and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 8 inches; loam

H2--8 to 30 inches; loam
H3--30 to 36 inches; loam
H4--36 to 60 inches; loam

956--Canisteo-Glencoe Clay Loams

Component Description

Canisteo and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; clay loam
H2--22 to 28 inches; clay loam
H3--28 to 60 inches; loam

Glencoe and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 26 inches; clay loam
H2--26 to 38 inches; clay loam
H3--38 to 60 inches; loam

960D2--Storden-Clarion Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 50 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 24 inches; loam
H3--24 to 60 inches; loam

Clarion and similar soils
Extent: 35 percent of the unit

Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 16 inches; loam
H2--16 to 32 inches; loam
H3--32 to 60 inches; loam

999B2--Ves-Estherville Complex, 2 To 8 Percent Slopes, Eroded

Component Description

Ves and similar soils
Extent: 60 percent of the unit
Slope range: 4 to 8 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 26 inches; loam
H3--26 to 32 inches; loam
H4--32 to 60 inches;

Estherville and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 20 inches; sandy loam
H3--20 to 60 inches; gravelly coarse sand

1016--Udorthents, Loamy

Component Description

Udorthents and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:

H1--0 to 60 inches; loam
H2--60 to 80 inches;

1030--Udorthents-Pits, Complex

Component Description

Udorthents
Extent: 50 percent of the unit
Surface layer texture: Loam
Drainage class: Well drained
Flooding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
H1--0 to 60 inches; loam
H2--60 to 80 inches; variable

Pits
Extent: 40 percent of the unit

1055--Palms-Glencoe Complex, Ponded

Component Description

Palms and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
H1--0 to 30 inches; muck
H2--30 to 60 inches; clay loam

Glencoe and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 30 inches; clay loam
H2--30 to 60 inches; clay loam

1356--Water, Miscellaneous

Component Description

Water, miscellaneous
Extent: 100 percent of the unit

1833--Coland Clay Loam, Occasionally Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 60 inches; clay loam

1834--Coland Clay Loam, Frequently Flooded

Component Description

Coland and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 36 inches; clay loam
H3--36 to 60 inches; clay loam

1907--Lakefield Silty Clay Loam

Component Description

Lakefield and similar soils
Extent: 90 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 60 inches; silt loam

1931--Essexville Sandy Loam

Component Description

Essexville and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 22 inches; sand
H3--22 to 60 inches; clay loam

1981--Hanlon-Kalmarville Complex, 0 To 4 Percent Slopes

Component Description

Hanlon and similar soils
Extent: 50 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 15 inches; fine sandy loam
H2--15 to 40 inches; fine sandy loam
H3--40 to 60 inches; loamy sand

Kalmarville and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Content of organic matter in the upper 10 inches: 3.0 percent

W--Water

Component Description

Census water
Extent: 95 percent of the unit

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Soil Descriptions - Non Technical

26--Aazdahl Clay Loam

Component Description

Aazdahl and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; clay loam
H2--12 to 18 inches; clay loam
H3--18 to 60 inches; silty clay loam

33B--Barnes Loam, 1 To 6 Percent Slopes

Component Description

Barnes and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 20 inches; loam
H3--20 to 60 inches; loam

33B2--Barnes Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Barnes and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 16 inches; loam
H3--16 to 60 inches; loam

34--Parnell Silt Loam

Component Description

Parnell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 24 inches; silt loam
H2--24 to 55 inches; silty clay
H3--55 to 60 inches; silty clay

46--Borup Loam

Component Description

Borup and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 25 inches; very fine sandy loam
H3--25 to 60 inches; loamy very fine sand

47--Colvin Silty Clay Loam

Component Description

Colvin and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November

December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 5.3 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 24 inches; silt loam
H3--24 to 60 inches; silt loam

50--Cashel Silty Clay

Component Description

Cashel and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding does not occur (months):
January February June July August September October
November December
Flooding is most likely (frequency, months):
Occasional March April May
Wet soil moisture status is highest (depth, months):
2.5 feet March July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 5.8 percent
Typical profile:
H1--0 to 9 inches; silty clay
H2--9 to 60 inches; silty clay

52--Augsburg Very Fine Sandy Loam

Component Description

Augsburg and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; very fine sandy loam
H2--13 to 20 inches; very fine sandy loam
H3--20 to 27 inches; loamy very fine sand
H4--27 to 60 inches; silty clay

56--Fargo Silty Clay Loam

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Swale
Slope range: 0 to 2 percent

Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 28 inches; clay
H3--28 to 60 inches; clay

57A--Fargo Silty Clay, 0 To 2 Percent Slopes

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Swale
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 11 inches; silty clay
H2--11 to 20 inches; clay
H3--20 to 60 inches; silty clay

57B--Fargo Silty Clay, 2 To 6 Percent Slopes

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 2 to 6 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August

September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.8 percent
Typical profile:
H1--0 to 9 inches; silty clay
H2--9 to 26 inches; clay
H3--26 to 60 inches; silty clay

58--Kittson Loam

Component Description

Kittson and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 18 inches; loam
H3--18 to 60 inches; clay loam

59--Grimstad Fine Sandy Loam

Component Description

Grimstad and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.8 feet April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 18 inches; sandy loam
H2--18 to 32 inches; fine sand
H3--32 to 60 inches; silty clay loam

60--Glyndon Very Fine Sandy Loam

Component Description

Glyndon and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November

December
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.7 percent
Typical profile:
H1--0 to 9 inches; very fine sandy loam
H2--9 to 23 inches; very fine sandy loam
H3--23 to 60 inches; very fine sandy loam

61--Arveson Loam

Component Description

Arveson and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 11 inches; loam
H2--11 to 35 inches; sandy loam
H3--35 to 60 inches; fine sand

63--Rockwell Loam

Component Description

Rockwell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 19 inches; loam
H3--19 to 24 inches; fine sand
H4--24 to 60 inches; silty clay loam

64--Ulen Fine Sandy Loam

Component Description

Ulen and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent

Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 5.3 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 11 inches; fine sandy loam
H2--11 to 23 inches; loamy fine sand
H3--23 to 60 inches; fine sand

65--Foxhome Sandy Loam

Component Description

Foxhome and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 14 inches; sandy loam
H2--14 to 18 inches; sandy loam
H3--18 to 30 inches; very gravelly coarse sand
H4--30 to 60 inches; silt loam

66--Flaming Loamy Fine Sand

Component Description

Flaming and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loamy fine sand
H2--9 to 60 inches; fine sand

67A--Bearden Silt Loam, 0 To 2 Percent Slopes

Component Description

Bearden and similar soils
Extent: 95 percent of the unit

Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 26 inches; silt loam
H3--26 to 60 inches; silty clay loam

67B2--Bearden Silt Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Bearden and similar soils
Extent: 95 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 32 inches; silt loam
H3--32 to 60 inches; silty clay loam

68--Arveson Loam, Depressional

Component Description

Arveson and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 26 inches; fine sandy loam
H3--26 to 60 inches; fine sand

71--Fossum Loamy Fine Sand

Component Description

Fossum and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 12 inches; loamy fine sand
H2--12 to 20 inches; fine sand
H3--20 to 60 inches; sand

93--Bearden Silty Clay Loam

Component Description

Bearden and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 15 inches; silty clay loam
H2--15 to 33 inches; silt loam
H3--33 to 60 inches; silt loam

107--Winger Silt Loam

Component Description

Winger and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November

December
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 32 inches; silt loam
H3--32 to 60 inches; clay loam

108--Mcintosh Silt Loam

Component Description

Mcintosh and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 25 inches; silt loam
H3--25 to 60 inches; clay loam

157A--Wahpeton Clay, 0 To 2 Percent Slopes

Component Description

Wahpeton and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 27 inches; clay
H2--27 to 60 inches; silty clay

157B--Wahpeton Clay, 2 To 6 Percent Slopes

Component Description

Wahpeton and similar soils
Extent: 95 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches

Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 27 inches; clay
H2--27 to 60 inches; silty clay

184A--Hamerly Clay Loam, 0 To 2 Percent Slopes

Component Description

Hamerly and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 25 inches; clay loam
H3--25 to 60 inches; clay loam

184B--Hamerly Loam, 1 To 4 Percent Slopes

Component Description

Hamerly and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.1 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 20 inches; loam
H3--20 to 60 inches; loam

187--Haug Muck

Component Description

Haug and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):

0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 13.0 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 14 inches; muck
H2--14 to 20 inches; loam
H3--20 to 60 inches; silt loam

236--Vallers Loam

Component Description

Vallers and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 25 inches; clay loam
H3--25 to 60 inches; clay loam

245B--Lohnes Loamy Sand, 1 To 6 Percent Slopes

Component Description

Lohnes and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 16 inches; loamy sand
H2--16 to 22 inches; loamy sand
H3--22 to 60 inches; coarse sand

290B--Rothsay Silt Loam, 2 To 4 Percent Slopes

Component Description

Rothsay and similar soils
Extent: 95 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent

Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 16 inches; silt loam
H3--16 to 21 inches; very fine sandy loam
H4--21 to 60 inches; very fine sandy loam

290B2--Rothsay Silt Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Rothsay and similar soils
Extent: 95 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 16 inches; silt loam
H3--16 to 21 inches; very fine sandy loam
H4--21 to 60 inches; very fine sandy loam

293B--Swenoda Fine Sandy Loam, 1 To 4 Percent Slopes

Component Description

Swenoda and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; fine sandy loam
H2--13 to 21 inches; fine sandy loam
H3--21 to 60 inches; silt loam

335--Urness Mucky Silt Loam

Component Description

Urness and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December

Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 30.0 percent
Typical profile:
H1--0 to 10 inches; mucky silt loam
H2--10 to 48 inches; mucky silt loam
H3--48 to 60 inches; clay loam

343A--Wheatville Silt Loam, 0 To 2 Percent Slopes

Component Description

Wheatville and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 37 inches; very fine sandy loam
H3--37 to 60 inches; silty clay

343B2--Wheatville Very Fine Sandy Loam, 2 To 6 Percent Slopes, Eroded

Component Description

Wheatville and similar soils
Extent: 95 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; very fine sandy loam
H2--10 to 37 inches; very fine sandy loam
H3--37 to 60 inches; clay

344--Quam Silt Loam

Component Description

Quam and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May

November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 10.5 percent
Typical profile:
H1--0 to 10 inches;
H2--10 to 32 inches; silty clay loam
H3--32 to 60 inches; silty clay loam

359--Lamoure Silty Clay Loam, Frequently Flooded

Component Description

Lamoure and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
0.8 foot January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 34 inches; silty clay loam
H2--34 to 60 inches; silt loam

402B--Sioux Sandy Loam, 1 To 6 Percent Slopes

Component Description

Sioux and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 11 inches; gravelly loamy sand
H3--11 to 60 inches; very gravelly coarse sand

403--Viking Silty Clay

Component Description

Viking and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
2.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 12 inches; silty clay
H2--12 to 27 inches; clay
H3--27 to 60 inches; clay

413--Osakis Sandy Loam

Component Description

Osakis and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 4.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 19 inches; sandy loam
H3--19 to 24 inches; gravelly loamy sand
H4--24 to 60 inches; gravelly sand

418--Lamoure Silty Clay Loam, Occasionally Flooded

Component Description

Lamoure and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
September October
Wet soil moisture status is highest (depth, months):
0.8 foot January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 12.0 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 32 inches; silty clay loam
H2--32 to 60 inches; silt loam

425--Donaldson Very Fine Sandy Loam

Component Description

Donaldson and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; very fine sandy loam
H2--9 to 19 inches; very fine sandy loam
H3--19 to 30 inches; loamy very fine sand
H4--30 to 60 inches; silty clay

426--Foldahl Loamy Fine Sand

Component Description

Foldahl and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet March April May November
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 22 inches; loamy fine sand
H3--22 to 60 inches; loam

429--Northcote Clay

Component Description

Northcote and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
2.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches

Content of organic matter in the upper 10 inches: 4.3 percent
Typical profile:
H1--0 to 9 inches; clay
H2--9 to 20 inches; clay
H3--20 to 60 inches; clay

435--Syrene Sandy Loam

Component Description

Syrene and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 5.1 percent
Typical profile:
H1--0 to 9 inches; sandy loam
H2--9 to 18 inches; sandy loam
H3--18 to 60 inches; gravelly sand

494--Darnen Silt Loam

Component Description

Darnen and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 24 inches; silt loam
H2--24 to 35 inches; clay loam
H3--35 to 60 inches; clay loam

497--Hantho Silt Loam

Component Description

Hantho and similar soils
Extent: 95 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August September October November December
Ponding: None

Available water capacity to a depth of 60 inches: 12.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 18 inches; silt loam
H2--18 to 32 inches; silt loam
H3--32 to 60 inches; silt loam

508--Wyndmere Fine Sandy Loam

Component Description

Wyndmere and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 11 inches; fine sandy loam
H2--11 to 27 inches; fine sandy loam
H3--27 to 60 inches; fine sandy loam

510--Elmville Very Fine Sandy Loam

Component Description

Elmville and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.7 feet April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
December
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 15 inches; very fine sandy loam
H2--15 to 34 inches; loamy very fine sand
H3--34 to 60 inches; silty clay

540--Seelyeville Muck

Component Description

Seelyeville and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):

At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding is shallowest (depth, months):
0.3 foot August September
Ponding is deepest (depth, months):
1.0 foot April October
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
H1--0 to 4 inches; muck
H2--4 to 60 inches; muck

547--Deerwood Muck

Component Description

Deerwood and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot July August September
Ponding is shallowest (depth, months):
0.3 foot August September
Ponding is deepest (depth, months):
1.0 foot April October
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
H1--0 to 12 inches; muck
H2--12 to 28 inches; fine sand
H3--28 to 60 inches; sand

582--Roliss Clay Loam

Component Description

Roliss and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
1.0 feet April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 10 inches; clay loam
H2--10 to 17 inches; clay loam

H3--17 to 60 inches; clay loam

640--Galchutt Silt Loam

Component Description

Galchutt and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 13 inches; loam
H3--13 to 60 inches; silty clay

642--Clearwater Sandy Clay Loam

Component Description

Clearwater and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Sandy clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Rare April May June
Wet soil moisture status is highest (depth, months):
1.0 feet April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 9 inches; sandy clay loam
H2--9 to 17 inches; clay
H3--17 to 60 inches; silty clay

645--Espelie Fine Sandy Loam

Component Description

Espelie and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):

Rare April May June
Wet soil moisture status is highest (depth, months):
1.0 feet April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 11 inches; fine sandy loam
H2--11 to 27 inches; loamy fine sand
H3--27 to 60 inches; silty clay

647--Hilaire Loamy Fine Sand

Component Description

Hilaire and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loamy fine sand
H2--10 to 26 inches; loamy sand
H3--26 to 60 inches; silty clay

698--Doran Clay Loam

Component Description

Doran and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.8 inches
Content of organic matter in the upper 10 inches: 5.7 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 22 inches; clay
H3--22 to 60 inches; clay loam

814--Hamerly-Lindaas Silty Clay Loams

Component Description

Hamerly and similar soils
Extent: 60 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 17 inches; clay loam
H3--17 to 60 inches; clay loam

Lindaas and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; silty clay loam
H2--9 to 27 inches; clay
H3--27 to 60 inches; silty clay loam

821--Doran-Lindaas Complex

Component Description

Doran and similar soils
Extent: 55 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 5.7 percent
Typical profile:
H1--0 to 9 inches; clay loam
H2--9 to 19 inches; silty clay
H3--19 to 60 inches; silty clay loam

Lindaas and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Surface layer texture: Silt loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; silt loam
H2--17 to 30 inches; clay
H3--30 to 60 inches; silty clay loam

903B2--Barnes-Langhei Loams, 2 To 6 Percent Slopes, Eroded

Component Description

Barnes and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 20 inches; loam
H3--20 to 60 inches; loam

Langhei and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 60 inches; loam

908--Bearden-Fargo Complex

Component Description

Bearden and similar soils
Extent: 60 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August

September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; silty clay loam
H2--13 to 22 inches; silty clay loam
H3--22 to 60 inches; silty clay loam

Fargo and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
1.0 foot March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 12 inches; silty clay
H2--12 to 21 inches; clay
H3--21 to 60 inches; silty clay

942C2--Langhei-Barnes Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Langhei and similar soils
Extent: 65 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 60 inches; loam

Barnes and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 19 inches; loam
H3--19 to 60 inches; loam

942D2--Langhei-Barnes Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Langhei and similar soils
Extent: 70 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 60 inches; loam

Barnes and similar soils
Extent: 25 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 20 inches; loam
H3--20 to 60 inches; loam

957B2--Rothsay-Zell Silt Loams, 2 To 6 Percent Slopes, Eroded

Component Description

Rothsay and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 10 inches; silt loam
H2--10 to 20 inches; silt loam
H3--20 to 60 inches; very fine sandy loam

Zell and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 28 inches; silt loam
H3--28 to 60 inches; very fine sandy loam

969B--Zell-Rothsay Silt Loams, 1 To 4 Percent Slopes

Component Description

Zell and similar soils
Extent: 55 percent of the unit

Slope range: 2 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 31 inches; silt loam
H3--31 to 60 inches; very fine sandy loam

Rothsay and similar soils
Extent: 35 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 16 inches; silt loam
H3--16 to 60 inches; very fine sandy loam

969C2--Zell-Rothsay Silt Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Zell and similar soils
Extent: 55 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; silt loam
H2--7 to 16 inches; silt loam
H3--16 to 60 inches; very fine sandy loam

Rothsay and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 16 inches; silt loam
H3--16 to 60 inches; very fine sandy loam

969D2--Zell-Rothsay Silt Loams, 12 To 18 Percent Slopes, Eroded

Component Description

Zell and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Silt loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 6 inches; silt loam
H2--6 to 31 inches; silt loam
H3--31 to 60 inches; very fine sandy loam

Rothsay and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 12.7 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 15 inches; silt loam
H3--15 to 60 inches; very fine sandy loam

987--Rockwell Fine Sandy Loam, Depressional

Component Description

Rockwell and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.5 feet August September
Ponding is shallowest (depth, months):
0.2 foot January February July August
September October November
December
Ponding is deepest (depth, months):
0.5 foot April
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 12 inches; fine sandy loam
H2--12 to 19 inches; sandy loam
H3--19 to 24 inches; fine sand
H4--24 to 60 inches; loam

1029--Pits, Gravel

Component Description

Pits
Extent: 100 percent of the unit

1055--Haplaquolls And Histosols, Ponded

Component Description

Aquolls and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 2 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June October November
Wet soil moisture status is lowest (depth, months):
1.5 feet February March August
Ponding: At 0.2 foot all year
Typical profile:
H1--0 to 60 inches;

Histosols and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
0.5 foot August
Ponding is shallowest (depth, months):
0.5 foot July August September October
Ponding is deepest (depth, months):
1.0 foot January February March April May
June November December
Available water capacity to a depth of 60 inches: 18.1 inches
Content of organic matter in the upper 10 inches: 55.0 percent
Typical profile:
H1--0 to 42 inches;
H2--42 to 60 inches;

1819--Glyndon Silty Clay Loam

Component Description

Glyndon and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 18 inches; silty clay loam
H2--18 to 24 inches; very fine sandy loam
H3--24 to 60 inches; very fine sandy loam

1871--Fargo Silty Clay, Swales

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
November December
Wet soil moisture status is lowest (depth, months):
1.0 foot August September
Ponding: At 0.2 foot all year
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 10 inches; silty clay
H2--10 to 20 inches; clay
H3--20 to 60 inches; clay

1872--Fargo Silty Clay, Silty Substratum

Component Description

Fargo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February March August September October November
December
Flooding is most likely (frequency, months):
Rare April May June July
Wet soil moisture status is highest (depth, months):
2.0 feet January February March April May
June September October November
December
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
H1--0 to 13 inches; silty clay
H2--13 to 30 inches; silty clay
H3--30 to 60 inches; silty clay loam

1874--Lohnes Sandy Loam

Component Description

Lohnes and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet April May June July August
September October
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March November
December
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 16 inches; sandy loam
H2--16 to 60 inches; gravelly loamy sand

1913C--Wahpeton-Cashel Silty Clays, 0 To 15 Percent Slopes

Component Description

Wahpeton and similar soils
Extent: 55 percent of the unit
Slope range: 0 to 15 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Occasional March April May June
Wet soil moisture status is highest (depth, months):
3.0 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.1 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 17 inches; silty clay
H2--17 to 60 inches; clay

Cashel and similar soils
Extent: 40 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding does not occur (months):
January February June July August September October
November December
Flooding is most likely (frequency, months):
Frequent March April May
Wet soil moisture status is highest (depth, months):
2.0 feet March April May June July
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 14 inches; silty clay
H2--14 to 60 inches; silty clay

1916--Lindaas Silt Loam

Component Description

Lindaas and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June July
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February August
September October November
December

Ponding is shallowest (depth, months):
0.2 foot June
Ponding is deepest (depth, months):
0.5 foot March April
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 27 inches; clay
H3--27 to 60 inches; silty clay loam

1921--Foldahl Very Fine Sandy Loam

Component Description

Foldahl and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 3 percent
Surface layer texture: Very fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 10 inches; very fine sandy loam
H2--10 to 22 inches; fine sand
H3--22 to 60 inches; silty clay loam

1944--Perella Silty Clay

Component Description

Perella and similar soils
Extent: 95 percent of the unit
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 5.7 percent
Typical profile:
H1--0 to 9 inches; silty clay
H2--9 to 19 inches; silty clay
H3--19 to 60 inches; silt loam

1948--Fargo-Enloe Complex

Component Description

Fargo and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February August September October November

December
        Flooding is most likely (frequency, months):
Rare   March April May June July
        Wet soil moisture status is highest (depth, months):
1.0 foot   March April May June July
        Wet soil moisture status is lowest (depth, months):
More than 5.0 feet   January February August
  September October November
  December
        Ponding: None
        Available water capacity to a depth of 60 inches: 9.7 inches
        Content of organic matter in the upper 10 inches: 7.0 percent
        Typical profile:
H1--0 to 10 inches; silty clay
H2--10 to 22 inches; clay
H3--22 to 60 inches; clay

     Enloe and similar soils
        Extent: 40 percent of the unit
        Geomorphic description:
Swale
Depression
        Slope range: 0 to 1 percent
        Surface layer texture: Silty clay loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Poorly drained
        Flooding does not occur (months):
January February August September October November
December
        Flooding is most likely (frequency, months):
Rare   March April May June July
        Wet soil moisture status is highest (depth, months):
At the surface   April May June
        Wet soil moisture status is lowest (depth, months):
More than 5.0 feet   January February March July
  August September October
  November December
        Ponding: At 0.5 foot all year
        Available water capacity to a depth of 60 inches: 9.9 inches
        Content of organic matter in the upper 10 inches: 7.5 percent
        Typical profile:
H1--0 to 14 inches; silty clay loam
H2--14 to 26 inches; clay
H3--26 to 60 inches; clay

1971--Divide Loam

  Component Description

     Divide and similar soils
        Extent: 95 percent of the unit
        Slope range: 0 to 3 percent
        Surface layer texture: Loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Moderately well drained
        Flooding: None
        Wet soil moisture status is highest (depth, months):
2.5 feet   April May June
        Wet soil moisture status is lowest (depth, months):
More than 5.0 feet   January February March July
  August September October
  November December
        Ponding: None
        Available water capacity to a depth of 60 inches: 6.2 inches
        Content of organic matter in the upper 10 inches: 4.3 percent
        Typical profile:
H1--0 to 9 inches; loam
H2--9 to 23 inches; loam
H3--23 to 60 inches; stratified sand to gravelly sand

M-W--Water, Miscellaneous

  Component Description

     Water, miscellaneous
        Extent: 100 percent of the unit

Miscellaneous water map units are not naturally occuring water areas. They are constructed and include; sewage lagoons, storm water sediment basins with a permanent pool of water, and aquaculture ponds. This map unit is not soil, no interpretations assigned.

W--Water

Additional Components

Water: 95 percent of the unit

Winona County, Minnesota

The non-technical descriptions for this county are being developed and should be available soon.

Soil Descriptions - Non Technical

7A--Hubbard Loamy Sand, 0 To 2 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,AB--0 to 20 inches; loamy sand
Bw--20 to 32 inches; loamy sand
BC,C--32 to 80 inches; sand

7B--Hubbard Loamy Sand, 2 To 6 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Backslope
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 18 inches; loamy sand
Bw--18 to 23 inches; loamy sand
BC,C--23 to 80 inches; sand

7C--Hubbard Loamy Sand, 6 To 12 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace

Position on landform:
Shoulder
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,AB--0 to 12 inches; loamy sand
Bw--12 to 33 inches; coarse sand
C--33 to 80 inches; coarse sand

8B--Sparta Loamy Sand, 1 To 6 Percent Slopes

Component Description

Sparta and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Shoulder
Summit
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A--0 to 16 inches; loamy sand
Bw--16 to 29 inches; loamy sand
C--29 to 60 inches; sand

35--Blue Earth Mucky Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Blue earth, depressional and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Coprogenous earth over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 12.6 inches

Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
Ap--0 to 10 inches; mucky silty clay loam
Cg--10 to 68 inches; mucky silty clay loam
2Cg--68 to 80 inches; loam

74B--Dickinson Fine Sandy Laom, 1 To 6 Percent Slopes

Component Description

Dickinson and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Summit
Backslope
Slope range: 1 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap,A1,A2--0 to 18 inches; fine sandy loam
Bw1,Bw2--18 to 30 inches; fine sandy loam
BC--30 to 36 inches; loamy sand
C--36 to 60 inches; sand

86--Canisteo Clay Loam, Moderately Fine Substratum, 0 To 2 Percent Slopes

Component Description

Canisteo, mod fine substratum and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and rims of depressions
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Bkg--18 to 39 inches; loam
Cg--39 to 80 inches; loam

Additional Components

Cordova: 15 percent of the unit

106C2--Lester Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Hill on moraine

Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Additional Components

Angus: 15 percent of the unit

106D2--Lester Loam, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

106E--Lester Loam, 18 To 25 Percent Slopes

Component Description

Lester and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
A--0 to 5 inches; loam

BE,Bt--5 to 34 inches; clay loam
Bk--34 to 60 inches; loam
C--60 to 80 inches; loam

109--Cordova Clay Loam, 0 To 2 Percent Slopes

Component Description

Cordova and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Btg--18 to 38 inches; clay loam
Cg--38 to 80 inches; loam

114--Glencoe Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Glencoe, depressional and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap--0 to 10 inches; clay loam
A,ABg--10 to 35 inches; clay loam
Bg--35 to 48 inches; loam
Cg--48 to 60 inches; loam

138--Lerdal Silty Clay Loam, 1 To 3 Percent Slopes

Component Description

Lerdal and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Moraine
Position on landform:

Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 2.4 percent
Typical profile:
Ap--0 to 7 inches; silty clay loam
E--7 to 9 inches; silty clay loam
Bt,Btg,Bw--9 to 47 inches; silty clay loam
Bk--47 to 60 inches; clay loam

158A--Zimmerman Fine Sand, 0 To 3 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Ap--0 to 7 inches; fine sand
E,Bw,E&Bt--7 to 80 inches; fine sand

158B--Zimmerman Fine Sand, 3 To 6 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Shoulder
Backslope
Summit
Slope range: 3 to 6 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Ap--0 to 7 inches; fine sand
E,Bw,E&Bt--7 to 80 inches; fine sand

158C--Zimmerman Fine Sand, 6 To 12 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Shoulder
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Ap--0 to 7 inches; fine sand
E,Bw,E&Bt--7 to 80 inches; fine sand

158E--Zimmerman Fine Sand, 12 To 25 Percent Slopes

Component Description

Zimmerman and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on outwash plain
Position on landform:
Backslope
Shoulder
Slope range: 12 to 25 percent
Surface layer texture: Fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 0.5 percent
Typical profile:
A--0 to 3 inches; fine sand
E,Bw,E&Bt--3 to 80 inches; fine sand

169C--Braham Loamy Fine Sand, 6 To 12 Percent Slopes

Component Description

Braham and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.1 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:

Ap--0 to 8 inches; loamy fine sand
E--8 to 28 inches; loamy sand
2Bt--28 to 48 inches; clay loam
2Bk--48 to 80 inches; loam

181--Litchfield Loamy Fine Sand, 0 To 2 Percent Slopes

Component Description

Litchfield and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
1.3 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,A,AB--0 to 20 inches; loamy fine sand
Bw--20 to 33 inches; fine sand
BC--33 to 40 inches; very fine sandy loam
C--40 to 80 inches; loamy fine sand

229--Waldorf Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Waldorf and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Lake plain
Moraine
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
Ap,A,AB--0 to 20 inches; silty clay loam
Bg--20 to 53 inches; silty clay
Cg--53 to 80 inches; silty clay loam

231C--Lester Fine Sandy Loam, 6 To 12 Percent Slopes

Component Description

Lester and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder

Backslope
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; fine sandy loam
BE,Bt--9 to 53 inches; clay loam
C--53 to 80 inches; loam

231D--Lester Fine Sandy Loam, 12 To 18 Percent Slopes

Component Description

Lester and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
Ap--0 to 6 inches; fine sandy loam
Bt--6 to 34 inches; clay loam
C--34 to 80 inches; loam

235--Nessel Loam, 1 To 3 Percent Slopes

Component Description

Nessel and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
Ap--0 to 6 inches; loam
Bt--6 to 38 inches; clay loam
C--38 to 80 inches; loam

239--Le Sueur Clay Loam, 1 To 3 Percent Slopes

Component Description

Le sueur and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
5.9 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,AB--0 to 17 inches; clay loam
Bt--17 to 37 inches; clay loam
Bk--37 to 46 inches; loam
C--46 to 80 inches; loam

Additional Components

Cordova: 15 percent of the unit

247--Linder Loam, 0 To 2 Percent Slopes

Component Description

Linder and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
1.3 feet April
Wet soil moisture status is lowest (depth, months):
3.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,A--0 to 13 inches; loam
Bw--13 to 24 inches; sandy loam
2C--24 to 60 inches; stratified gravelly coarse sand to coarse sand to loamy coarse sand

255--Mayer Loam, 0 To 2 Percent Slopes

Component Description

Mayer and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Rims of depressions
Slope range: 0 to 2 percent

Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A1,A2--0 to 18 inches; loam
Bg--18 to 33 inches; sandy clay loam
2C--33 to 80 inches; gravelly coarse sand

256--Mazaska Silty Clay Loam, 0 To 2 Percent Slopes

Component Description

Mazaska and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.6 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 15 inches; silty clay loam
Btg--15 to 42 inches; clay
Bkg--42 to 80 inches; loam

258B--Sandberg Loamy Sand, 2 To 6 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 12 inches; loamy sand
Bw--12 to 19 inches; gravelly loamy coarse sand
Bk,C--19 to 80 inches; gravelly coarse sand

258C--Sandberg Loamy Sand, 6 To 12 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 12 inches; loamy sand
Bw--12 to 19 inches; gravelly loamy coarse sand
Bk,C--19 to 80 inches; gravelly coarse sand

258E--Sandberg Loamy Sand, 12 To 35 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Slope range: 12 to 35 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
A--0 to 12 inches; loamy sand
Bw--12 to 19 inches; gravelly loamy coarse sand
Bk,C--19 to 80 inches; gravelly coarse sand

260--Duelm Loamy Sand, 0 To 2 Percent Slopes

Component Description

Duelm and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May

Wet soil moisture status is lowest (depth, months):
4.0 feet February August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,AB--0 to 16 inches; loamy sand
Bw--16 to 30 inches; coarse sand
C--30 to 80 inches; coarse sand

261--Isan Sandy Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Isan, depressional and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
A--0 to 14 inches; sandy loam
AB,Bg--14 to 34 inches; loamy sand
Cg--34 to 80 inches; coarse sand

286B--Shorewood Silty Clay Loam, 3 To 6 Percent Slopes

Component Description

Shorewood and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Hill on lake plain
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 3 to 6 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; silty clay loam
Bt--17 to 39 inches; silty clay
2BCg,2Cg--39 to 60 inches; loam

294A--Rasset Sandy Loam, 0 To 2 Percent Slopes

Component Description

Rasset and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 15 inches; sandy loam
Bt--15 to 28 inches; sandy loam
2BC--28 to 36 inches; loamy sand
2C--36 to 80 inches; sand

323--Shields Silty Clay Loam, 0 To 3 Percent Slopes

Component Description

Shields and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; silty clay loam
BE,Btg--8 to 41 inches; silty clay, silty clay
2Bk--41 to 80 inches; silty clay loam, silty clay loam

327A--Dickman Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dickman and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash

Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bw--12 to 19 inches; sandy loam
2Bw--19 to 33 inches; loamy sand
2C--33 to 80 inches; sand

327B--Dickman Sandy Loam, 2 To 6 Percent Slopes

Component Description

Dickman and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.6 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 12 inches; sandy loam
Bw--12 to 19 inches; sandy loam
2Bw--19 to 33 inches; loamy sand
2C--33 to 80 inches; sand

375--Forada Loam, 0 To 2 Percent Slopes

Component Description

Forada and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
Ap,A--0 to 16 inches; loam
Bg--16 to 28 inches; loam
2Cg--28 to 60 inches; coarse sand

392--Biscay Loam, 0 To 2 Percent Slopes

Component Description

Biscay and similar soils

Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A1,A2--0 to 20 inches; loam
Bg--20 to 28 inches; loam
2BCg--28 to 36 inches; gravelly loam
2Cg--36 to 60 inches; stratified gravelly coarse sand to loamy sand

406--Dorset Sandy Loam, 0 To 2 Percent Slopes

Component Description

Dorset and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt--11 to 19 inches; sandy loam
2BC--19 to 32 inches; gravelly loamy sand
2C--32 to 80 inches; gravelly coarse sand

414--Hamel Loam, 1 To 3 Percent Slopes

Component Description

Hamel and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways and swales
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):

3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 24 inches; loam
Btg--24 to 46 inches; clay loam
Cg--46 to 80 inches; loam

441--Almora Loam, 0 To 2 Percent Slopes

Component Description

Almora and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 10 inches; loam
BE--10 to 14 inches; fine sandy loam
Bt--14 to 36 inches; loam
2Bt--36 to 41 inches; loamy sand
2C--41 to 80 inches; gravelly coarse sand

461B--Koronis Loam, 2 To 6 Percent Slopes

Component Description

Koronis and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 31 inches; loam
Bk,C--31 to 80 inches; fine sandy loam

461C2--Koronis Loam, 6 To 12 Percent Slopes, Eroded

Component Description

Koronis, eroded and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder

Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 31 inches; loam
Bk,C--31 to 80 inches; fine sandy loam

461E--Koronis Loam, 18 To 40 Percent Slopes

Component Description

Koronis and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 28 inches; loam
Bk--28 to 80 inches; fine sandy loam

511--Marcellon Loam, Map<30, 0 To 3 Percent Slopes

Component Description

Marcellon, map<30 and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 13 inches; loam
Bt--13 to 32 inches; loam
Bk--32 to 60 inches; sandy loam

523--Houghton Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Houghton, drained and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Op--0 to 10 inches; muck
Oa--10 to 80 inches; muck

525--Muskego Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Muskego, surface drained and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

539--Klossner Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Klossner, drained and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained

Parent material:
Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 50.0 percent
Typical profile:
Op,Oa--0 to 26 inches; muck
2A1--26 to 36 inches; mucky silty clay loam
2A2--36 to 48 inches; silty clay loam
2Cg--48 to 80 inches; loam

540--Seelyeville Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Seelyeville, surface drained and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Outwash plain
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 10 inches; muck
Oa2,Oa5--10 to 80 inches; muck

543--Markey Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Markey, surface drained and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):

1.0 foot March April May
  Available water capacity to a depth of 60 inches: 15.8 inches
  Content of organic matter in the upper 10 inches: 70.0 percent
  Typical profile:
Oa--0 to 36 inches; muck
A--36 to 42 inches; loamy sand
Cg--42 to 80 inches; sand

548--Medo Muck, Depressional, 0 To 1 Percent Slopes

Component Description

Medo, drained and similar soils
  Extent: 80 percent of the unit
  Geomorphic description:
Stream terrace
Outwash plain
  Position on landform:
Depressions
  Slope range: 0 to 1 percent
  Surface layer texture: Muck
  Depth to restrictive feature:
Very deep (more than 60 inches)
  Drainage class: Very poorly drained
  Parent material:
Organic material over outwash
  Flooding: None
  Wet soil moisture status is highest (depth, months):
At the surface March April
  Wet soil moisture status is lowest (depth, months):
2.0 feet February August
  Ponding is shallowest (depth, months):
0.5 foot March
  Ponding is deepest (depth, months):
1.0 foot April
  Available water capacity to a depth of 60 inches: 14.3 inches
  Content of organic matter in the upper 10 inches: 70.0 percent
  Typical profile:
Op,Oa--0 to 27 inches; muck
2A--27 to 35 inches; mucky loam
2Bg--35 to 39 inches; sandy clay loam
2Cg--39 to 80 inches; gravelly loamy coarse sand

603--Hanlon Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Hanlon, occasionally flooded and similar soils
  Extent: 80 percent of the unit
  Geomorphic description:
Flood plain
  Position on landform:
Flats and slight rises
  Slope range: 0 to 2 percent
  Surface layer texture: Fine sandy loam
  Depth to restrictive feature:
Very deep (more than 60 inches)
  Drainage class: Moderately well drained
  Parent material:
Alluvium
  Flooding does not occur (months):
January February September October November December
  Flooding is most likely (frequency, months):
Occasional March April May June July August
  Wet soil moisture status is highest (depth, months):
2.5 feet April
  Wet soil moisture status is lowest (depth, months):
3.9 feet February August
  Ponding: None
  Available water capacity to a depth of 60 inches: 10.2 inches
  Content of organic matter in the upper 10 inches: 2.5 percent
  Typical profile:
A1,A2--0 to 40 inches; fine sandy loam
A3--40 to 63 inches; fine sandy loam
Bw--63 to 70 inches; sandy loam
Cg--70 to 80 inches; stratified sand to loamy fine sand to fine sandy loam

611D--Hawick Gravelly Sandy Loam, 12 To 25 Percent Slopes

Component Description

Hawick and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Shoulder
Backslope
Slope range: 12 to 25 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,AB--0 to 10 inches; gravelly sandy loam
C--10 to 60 inches; gravelly coarse sand

708--Rushlake Coarse Sand, 1 To 4 Percent Slopes

Component Description

Rushlake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach
Position on landform:
Flats and slight rises
Slope range: 1 to 4 percent
Surface layer texture: Coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet April
Wet soil moisture status is lowest (depth, months):
4.0 feet February August September
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
A--0 to 9 inches; coarse sand
C--9 to 80 inches; coarse sand

740--Hamel-Glencoe, Depressional, Complex, 0 To 3 Percent Slopes

Component Description

Hamel and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Drainageways
Slope range: 0 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April

Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 24 inches; loam
Btg--24 to 46 inches; clay loam
Cg--46 to 80 inches; loam

Glencoe, depressional and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap--0 to 10 inches; clay loam
A,ABg--10 to 35 inches; clay loam
Bg--35 to 48 inches; loam
Cg--48 to 60 inches; loam

768--Mosford Sandy Loam, 0 To 2 Percent Slopes

Component Description

Mosford and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw--13 to 16 inches; coarse sandy loam
2Bw--16 to 35 inches; coarse sand
2C--35 to 80 inches; sand

771--Elkriver Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded

Component Description

Elkriver, rarely flooded and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Position on landform:

Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
A1,A3--10 to 35 inches; fine sandy loam
Bw--35 to 39 inches; fine sandy loam
2C--39 to 80 inches; sand

783C2--Lester-Kilkenny Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Kilkenny and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent

Typical profile:
Ap--0 to 9 inches; clay loam
Bt--9 to 53 inches; clay loam
2BC,2C--53 to 80 inches; loam

792--Fordum Fine Sandy Loam, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Fordum, frequently flooded and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Concave drainageways
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 6.6 percent
Typical profile:
A--0 to 7 inches; fine sandy loam
Cg--7 to 28 inches; sandy loam
2Cg--28 to 80 inches; sand

799--Seelyeville And Bowstring Soils, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Seelyeville, frequently flooded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 12 inches; muck
Oa2,Oa3--12 to 80 inches; muck

Bowstring, frequently flooded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent

Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material and alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 21.3 inches
Content of organic matter in the upper 10 inches: 65.0 percent
Typical profile:
Oa1,Oa2--0 to 38 inches; muck
Cg--38 to 47 inches; stratified fine sand to fine sandy loam
O'a1--47 to 80 inches; muck

804B--Koronis-Sunburg-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Koronis and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
Bt--8 to 25 inches; sandy loam
Bk--25 to 60 inches; sandy loam

Sunburg and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 4 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Apk--0 to 7 inches; sandy loam
Bk--7 to 60 inches; sandy loam

Hawick and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder

Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

804C2--Koronis-Sunburg-Hawick Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Koronis, eroded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
Bt--8 to 25 inches; sandy loam
Bk--25 to 60 inches; sandy loam

Sunburg and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Apk--0 to 7 inches; sandy loam
Bk--7 to 60 inches; sandy loam

Hawick and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained

Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

804D2--Koronis-Sunburg-Hawick Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Koronis, eroded and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
Bt--8 to 25 inches; sandy loam
Bk--25 to 60 inches; sandy loam

Sunburg and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Apk--0 to 7 inches; sandy loam
Bk--7 to 60 inches; sandy loam

Hawick and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

804E--Koronis-Sunburg-Hawick Complex, 18 To 40 Percent Slopes

Component Description

Koronis and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 18 to 40 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
A--0 to 5 inches; fine sandy loam
BA,Bt--5 to 21 inches; fine sandy loam
Bk--21 to 60 inches; fine sandy loam

Sunburg and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 18 to 40 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 4 inches; fine sandy loam
Bk--4 to 60 inches; fine sandy loam

Hawick and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 18 to 40 percent
Surface layer texture: Gravelly loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.0 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A1,A2--0 to 11 inches; gravelly loamy coarse sand
Bw--11 to 16 inches; gravelly loamy coarse sand

C--16 to 60 inches; gravelly coarse sand

807D2--Koronis-Sunburg Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Koronis, eroded and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
Ap--0 to 8 inches; sandy loam
Bt--8 to 25 inches; sandy loam
Bk--25 to 60 inches; sandy loam

Sunburg and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.6 inches
Content of organic matter in the upper 10 inches: 0.8 percent
Typical profile:
Apk--0 to 7 inches; sandy loam
Bk--7 to 60 inches; sandy loam

875B--Estherville-Hawick Complex, 2 To 6 Percent Slopes

Component Description

Estherville and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam

Bw1--13 to 18 inches; sandy loam
2Bw2--18 to 23 inches; loamy coarse sand
2C--23 to 60 inches; gravelly coarse sand

Hawick and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

875C--Hawick-Estherville Complex, 6 To 12 Percent Slopes

Component Description

Hawick and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

Estherville and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw1--13 to 18 inches; sandy loam

2Bw2--18 to 23 inches; loamy coarse sand
2C--23 to 60 inches; gravelly coarse sand

896B--Kingsley-Gotham Complex, 2 To 6 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A--0 to 6 inches; sandy loam
E--6 to 18 inches; sandy loam
Bt--18 to 45 inches; sandy loam
C--45 to 80 inches; sandy loam

Gotham and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 18 inches; loamy sand
Bw,BC--18 to 40 inches; sand
C--40 to 80 inches; sand

896C--Kingsley-Gotham Complex, 6 To 12 Percent Slopes

Component Description

Kingsley and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A--0 to 6 inches; sandy loam
E--6 to 18 inches; sandy loam
Bt--18 to 45 inches; sandy loam
C--45 to 80 inches; sandy loam

Gotham and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Glaciofluvial sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 18 inches; loamy sand
Bw,BC--18 to 40 inches; sand
C--40 to 80 inches; sand

945C2--Lester-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Storden, eroded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

945D2--Lester-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester, eroded and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Storden, eroded and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

956--Canisteo-Glencoe, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Canisteo, mod fine substratum and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and rims of depressions
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Bkg--18 to 39 inches; loam
Cg--39 to 80 inches; loam

Glencoe, depressional and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
Ap--0 to 10 inches; clay loam
A,ABg--10 to 35 inches; clay loam
Bg--35 to 48 inches; loam
Cg--48 to 60 inches; loam

978--Cordova-Rolfe, Depressional, Complex, 0 To 2 Percent Slopes

Component Description

Cordova and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,A--0 to 18 inches; clay loam
Btg--18 to 38 inches; clay loam
Cg--38 to 80 inches; loam

Rolfe, depressional and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent

Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A--0 to 12 inches; silt loam
E--12 to 20 inches; silt loam
Btg--20 to 35 inches; silty clay
2Bt--35 to 51 inches; clay loam
2Cg--51 to 60 inches; loam

1000--Arvilla Sandy Loam, Map>25, 0 To 2 Percent Slopes

Component Description

Arvilla, map>25 and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 14 inches; sandy loam
Bw--14 to 20 inches; sandy loam
2Bw,2Bk,2C--20 to 80 inches; gravelly coarse sand

1015--Udipsamments (cut And Fill Land)

Component Description

Udipsamments (cut and fill land)
Extent: 100 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Slope range: 0 to 2 percent
Parent material:
Variable sandy material
Flooding: None

The Udipsamments component, comprises of nearly level areas that had minimal grading and the cut and fill material is dominatly the sandy parent material. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1016--Udorthents, Loamy (cut And Fill Land)

Component Description

Udorthents (cut and fill land)
Extent: 100 percent of the unit

Geomorphic description:
Moraine
Slope range: 0 to 6 percent
Parent material:
Variable loamy material
Flooding: None

The Udorthents component, consists primarily of cut or fill operations to the landscape to level and or fill areas for development. The cut and or fill material is dominatly loamy soil material. Up to 30 percent of this map unit is covered by impervious surfaces. The majority of the area has been disturbed by construction activity. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1023C--Lester-Malardi Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Malardi and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

1023D--Lester-Malardi Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Lester and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Hill on moraine

Position on landform:
Backslope
Shoulder
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
Ap--0 to 7 inches; loam
Bt--7 to 38 inches; clay loam
Bk--38 to 60 inches; loam
C--60 to 80 inches; loam

Malardi and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 12 to 18 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

1026B--Lizzie Silt Loam, Moderately Wet, 1 To 5 Percent Slopes

Component Description

Lizzie, moderately wet and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Footslope
Backslope
Slope range: 1 to 5 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap,E--0 to 12 inches; silt loam
Bt--12 to 36 inches; silt loam
BC--36 to 40 inches; very fine sandy loam
C--40 to 80 inches; very fine sandy loam

1027--Udorthents, Wet Substratum (fill Land)

Component Description

Udorthents, wet substratum
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Stream terrace
Outwash plain
Position on landform:
Fill placed in depressions
Slope range: 0 to 2 percent
Parent material:
Variable soil material
Flooding: None

The Udorthents, wet substratum component comprises of fill material placed in wet depressional areas to match the adjoining upland landscape. Because of the variability of the components in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1030--Pits, Gravel-Udipsamments Complex

Component Description

Pits, gravel
Extent: 80 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Moraine
Parent material:
Sandy and gravelly outwash

Gravel pits are areas that have been mined for gravel or sand. This map unit is actively being mined or is an abandoned pit. Because of the variability of this component in this map unit, interpretation for specific uses are not available. Onsite investigation is needed.

Udipsamments
Extent: 20 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Stream terrace
Parent material:
Outwash

Udipsamments are areas of soil that support plant growth and are areas of the pit that have been reclaimed or abandoned. Because of the variability of this component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1035B--Crowfork Loamy Sand, 1 To 6 Percent Slopes

Component Description

Crowfork and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Summit
Shoulder
Slope range: 1 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 11 inches; loamy sand
E--11 to 20 inches; loamy fine sand
E&Bt--20 to 76 inches; loamy sand
C--76 to 80 inches; sand

1035C--Crowfork Loamy Sand, 6 To 12 Percent Slopes

Component Description

Crowfork and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Backslope
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 11 inches; loamy sand
E--11 to 20 inches; loamy fine sand
E&Bt--20 to 76 inches; loamy sand
C--76 to 80 inches; sand

1035D--Crowfork Loamy Sand, 12 To 18 Percent Slopes

Component Description

Crowfork and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.6 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap--0 to 11 inches; loamy sand
E--11 to 20 inches; loamy fine sand
E&Bt--20 to 76 inches; loamy sand
C--76 to 80 inches; sand

1036B--Angus Fine Sandy Loam, 2 To 5 Percent Slopes

Component Description

Angus and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:

Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; fine sandy loam
Bt--9 to 46 inches; loam
Bk--46 to 58 inches; loam
C--58 to 80 inches; loam

1037--Eckvoll Loamy Fine Sand, Map>25, 0 To 3 Percent Slopes

Component Description

Eckvoll, map>25 and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February June July
August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; loamy fine sand
E--9 to 24 inches; fine sand
2Bt--24 to 45 inches; loam
2C--45 to 80 inches; loam

1038A--Verndale Sandy Loam, Acid Substratum, 0 To 2 Percent Slopes

Component Description

Verndale, acid substratum and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches

Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 19 inches; sandy loam
2Bw--19 to 28 inches; sand
2C--28 to 80 inches; sand

1038B--Verndale Sandy Loam, Acid Substratum, 2 To 6 Percent Slopes

Component Description

Verndale, acid substratum and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Backslope
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 19 inches; sandy loam
2Bw--19 to 28 inches; sand
2C--28 to 80 inches; sand

1066B--Malardi-Hawick Complex, 1 To 6 Percent Slopes

Component Description

Malardi and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

Hawick and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on stream terrace
Hill on outwash plain
Position on landform:
Shoulder
Slope range: 3 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

1066C--Malardi-Hawick Complex, 6 To 12 Percent Slopes

Component Description

Malardi and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

Hawick and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

1066E--Malardi-Hawick Complex, 18 To 35 Percent Slopes

Component Description

Malardi and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit

Backslope
Slope range: 18 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 4.6 percent
Typical profile:
A--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt--14 to 21 inches; gravelly loamy coarse sand
2C--21 to 80 inches; gravelly sand

Hawick and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 18 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A--0 to 7 inches; sandy loam
Bw--7 to 11 inches; gravelly loamy coarse sand
C--11 to 80 inches; gravelly coarse sand

Additional Components

Tomall: 15 percent of the unit

1072--Udorthents, Shallow (sanitary Landfill)

Component Description

Udorthents, shallow
Extent: 100 percent of the unit
Geomorphic description:
Moraine
Outwash plain
Slope range: 0 to 20 percent
Parent material:
Variable loamy material
Flooding: None

The Udorthents component, consists primarily of soil fill over refuse material in a sanitary landfill operation. The soil cover material is dominatly loamy soil material. Up to 30 percent of this map unit can be covered by impervious surfaces. Because of the variability of the component in this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

1075--Klossner And Muskego Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Klossner, ponded and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions

Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

Muskego, ponded and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

1080--Klossner, Okoboji, And Glencoe Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Klossner, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

Okoboji, ponded and similar soils

Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium or lacustrine sediments over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.9 inches
Content of organic matter in the upper 10 inches: 14.0 percent
Typical profile:
A1--0 to 10 inches; mucky silty clay loam
A2--10 to 52 inches; silty clay loam
Bg--52 to 60 inches; silty clay loam

Glencoe, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
A--0 to 42 inches; silty clay loam
Bg--42 to 50 inches; clay loam
Cg--50 to 60 inches; loam

1087B--Angus-Malardi Complex, 2 To 6 Percent Slopes

Component Description

Angus and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:

Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

Malardi and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 15 inches; sandy loam
2Bt--15 to 29 inches; loamy coarse sand
2C--29 to 80 inches; gravelly sand

1094B--Angus-Cordova Complex, 0 To 5 Percent Slopes

Component Description

Angus and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

Cordova and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May

Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,AB--0 to 13 inches; loam
Btg--13 to 33 inches; clay loam
Cg--33 to 80 inches; loam

1099--Granby Loamy Fine Sand, Very Wet, 0 To 1 Percent Slopes

Component Description

Granby, very wet and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach on moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet August
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 7.0 percent
Typical profile:
A--0 to 12 inches; loamy fine sand
AC--12 to 24 inches; loamy fine sand
C--24 to 60 inches; loamy fine sand

1110--Isan Sandy Loam, 0 To 2 Percent Slopes

Component Description

Isan and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.8 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
Ap,A--0 to 18 inches; sandy loam
AB,Bg--18 to 29 inches; loamy sand
Cg--29 to 80 inches; coarse sand

1156--Cordova Loam, 0 To 2 Percent Slopes

Component Description

Cordova and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
Ap,AB--0 to 13 inches; loam
Btg--13 to 33 inches; clay loam
Cg--33 to 80 inches; loam

1161--Barry Loam, 0 To 2 Percent Slopes

Component Description

Barry and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap--0 to 11 inches; loam
Btg--11 to 33 inches; sandy clay loam
Bkg--33 to 60 inches; sandy loam

1163--Suckercreek Loam, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Suckercreek, frequently flooded and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Concave drainageways
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June

Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A--0 to 22 inches; loam
Cg--22 to 80 inches; loamy fine sand

1165--Lundlake Silty Clay Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Lundlake, depressional and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
Ap--0 to 12 inches; silty clay loam
A1,A2,AB--12 to 36 inches; loam
2Bg--36 to 72 inches; sandy loam
2Cg--72 to 80 inches; sandy loam

1173--Muskego And Klossner Soils, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Muskego, frequently flooded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:

Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

Klossner, frequently flooded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till
Flooding does not occur (months):
January February August September October November
December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

1186--Forestcity-Lundlake, Depressional, Complex, 0 To 3 Percent Slopes

Component Description

Forestcity and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Swales and drainageways
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
3.3 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 9.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A1--0 to 22 inches; fine sandy loam
A2,AB--22 to 43 inches; loam
2Btg--43 to 60 inches; sandy clay loam
2BCg--60 to 80 inches; sandy loam

Lundlake, depressional and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Very poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface March April
Wet soil moisture status is lowest (depth, months):
2.0 feet February August
Ponding is shallowest (depth, months):
0.5 foot March
Ponding is deepest (depth, months):
1.0 foot April
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A1--0 to 20 inches; loam
A2,A3,AB--20 to 46 inches; loam
Bg--46 to 54 inches; sandy loam
Cg--54 to 60 inches; sandy loam

1196B--Lida-Two Inlets Complex, 1 To 8 Percent Slopes

Component Description

Lida and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Hill on outwash plain
Position on landform:
Backslope
Summit
Slope range: 1 to 8 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 6 inches; sandy loam
E--6 to 8 inches; sandy loam
Bt--8 to 17 inches; coarse sandy loam
2Bt--17 to 25 inches; gravelly loamy coarse sand
2C--25 to 80 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on moraine
Position on landform:
Shoulder
Slope range: 1 to 8 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 19 inches; gravelly loamy sand
C--19 to 80 inches; gravelly sand

1196C--Lida-Two Inlets Complex, 8 To 15 Percent Slopes

Component Description

Lida and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Hill on outwash plain
Position on landform:
Summit
Backslope
Slope range: 8 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 6 inches; sandy loam
E--6 to 8 inches; sandy loam
Bt--8 to 17 inches; coarse sandy loam
2Bt--17 to 25 inches; gravelly loamy coarse sand
2C--25 to 80 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on moraine
Position on landform:
Shoulder
Slope range: 8 to 15 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
A--0 to 9 inches; loamy sand
Bt--9 to 19 inches; gravelly loamy sand
C--19 to 80 inches; gravelly sand

1196E--Lida-Two Inlets Complex, 15 To 30 Percent Slopes

Component Description

Lida and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Hill on outwash plain
Position on landform:
Summit
Backslope
Slope range: 15 to 30 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.2 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
A--0 to 6 inches; sandy loam
E--6 to 8 inches; sandy loam

Bt--8 to 17 inches; coarse sandy loam
2Bt--17 to 25 inches; gravelly loamy coarse sand
2C--25 to 80 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on moraine
Position on landform:
Shoulder
Slope range: 15 to 30 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
A--0 to 8 inches; loamy sand
BE,Bt--8 to 20 inches; loamy sand
BC,C--20 to 80 inches; gravelly sand

1197--Suckercreek Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Suckercreek, occasionally flooded and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.3 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 9.2 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
A--0 to 12 inches; fine sandy loam
Cg--12 to 80 inches; fine sandy loam

1199--Klossner And Lundlake Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Klossner, ponded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over till

Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
Oa--0 to 26 inches; muck
2A1--26 to 33 inches; silt loam
2A2--33 to 40 inches; loam
2Cg--40 to 80 inches; loam

Lundlake, ponded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Mucky loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 13.5 percent
Typical profile:
A1--0 to 8 inches; mucky loam
A2--8 to 26 inches; loam
A3,A4,Bkg--26 to 80 inches; sandy loam

1203--Muskego, Blue Earth, And Houghton Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Muskego, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over coprogenous earth
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75.0 percent
Typical profile:
Oa1--0 to 9 inches; muck
Oa2--9 to 36 inches; muck
Lco--36 to 60 inches; coprogenous earth

Blue earth, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Silt loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Coprogenous earth over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
A--0 to 50 inches; silt loam
Cg--50 to 60 inches; silt loam

Houghton, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
Oa--0 to 80 inches; muck

1204B--Reedslake Loam, 2 To 5 Percent Slopes

Component Description

Reedslake and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 12 inches; loam
Bt--12 to 26 inches; clay loam
Bk--26 to 48 inches; loam
C--48 to 80 inches; loam

1207B--Reedslake-Le Sueur Complex, 1 To 5 Percent Slopes

Component Description

Reedslake and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 12 inches; loam
Bt--12 to 26 inches; clay loam
Bk--26 to 48 inches; loam
C--48 to 80 inches; loam

Le sueur and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Toeslope
Footslope
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,AB--0 to 14 inches; loam
Bt--14 to 40 inches; clay loam
Bk--40 to 55 inches; loam
C--55 to 80 inches; loam

1213C--Cokato-Storden Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Cokato and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 23 inches; clay loam
Bk--23 to 48 inches; loam
C--48 to 80 inches; loam

Storden and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

1213D--Cokato-Storden Complex, 12 To 18 Percent Slopes, Eroded

Component Description

Cokato and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 20 inches; clay loam
Bk--20 to 40 inches; loam
C--40 to 80 inches; loam

Storden and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent

Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

1220C--Cokato-Storden-Hawick Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Cokato and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 23 inches; clay loam
Bk--23 to 48 inches; loam
C--48 to 80 inches; loam

Storden and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Backslope
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 7 inches; loam
Bk--7 to 55 inches; loam
C--55 to 80 inches; loam

Hawick and similar soils
Extent: 15 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 6 to 12 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.8 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
Ap,AB--0 to 10 inches; gravelly sandy loam

C--10 to 60 inches; gravelly coarse sand

1223--Sandberg-Arvilla, Map>25, Complex, 0 To 3 Percent Slopes

Component Description

Sandberg and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Slight rise
Slope range: 1 to 3 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 11 inches; loamy coarse sand
Bw,BC--11 to 35 inches; gravelly coarse sand
C--35 to 80 inches; gravelly coarse sand

Arvilla, map>25 and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Stream terrace
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 14 inches; coarse sandy loam
Bw--14 to 17 inches; coarse sandy loam
2Bw,2C--17 to 80 inches; gravelly coarse sand

1224--Hubbard-Verndale, Acid Substratum, Complex, 0 To 3 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats
Slope range: 1 to 3 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 11 inches; loamy coarse sand
Bw--11 to 27 inches; loamy sand

BC,C--27 to 80 inches; sand

Verndale, acid substratum and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats and slight swales
Slope range: 0 to 2 percent
Surface layer texture: Coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; coarse sandy loam
Bt--10 to 16 inches; coarse sandy loam
2Bw--16 to 45 inches; coarse sand
2C--45 to 80 inches; sand

1231--Hubbard-Mosford Complex, 0 To 3 Percent Slopes

Component Description

Hubbard and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Flats and slight rises
Slope range: 1 to 3 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,AB--0 to 20 inches; loamy sand
Bw--20 to 32 inches; loamy sand
BC,C--32 to 80 inches; sand

Mosford and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats swales
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap,A--0 to 13 inches; sandy loam
Bw--13 to 16 inches; coarse sandy loam
2Bw--16 to 35 inches; coarse sand
2C--35 to 80 inches; sand

1255--Elkriver Fine Sandy Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Elkriver, occasionally flooded and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 7.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
A1,A3--10 to 26 inches; fine sandy loam
Bw--26 to 32 inches; very fine sandy loam
2C--32 to 80 inches; sand

Additional Components

Fordum, frequently flooded: 15 percent of the unit

1256--Cantlin Loamy Fine Sand, 0 To 3 Percent Slopes

Component Description

Cantlin and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 3 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
3.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
Bw--8 to 22 inches; loamy fine sand
BC,C--22 to 80 inches; fine sand

1257--Elkriver-Mosford Complex, 0 To 6 Percent Slopes, Rarely Flooded

Component Description

Elkriver, rarely flooded and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Flood plain
Position on landform:

Flats
Slope range: 0 to 3 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Alluvium
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 10 inches; fine sandy loam
A1,A3--10 to 35 inches; fine sandy loam
Bw--35 to 39 inches; fine sandy loam
2C--39 to 80 inches; sand

Mosford, rarely flooded and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Slight rise
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material:
Outwash
Flooding does not occur (months):
January February July August September October November
December
Flooding is most likely (frequency, months):
Rare March April May June
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 11 inches; fine sandy loam
Bw--11 to 16 inches; fine sandy loam
2Bw--16 to 25 inches; fine sand
2C--25 to 80 inches; sand

1260B--Stonelake-Nebish, Moderately Wet, Complex, 2 To 6 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy coarse sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.4 inches

Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
Ap--0 to 8 inches; loamy coarse sand
Bt--8 to 30 inches; very gravelly loamy coarse sand
BC,C--30 to 80 inches; gravelly sand

Nebish, moderately wet and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
Ap--0 to 6 inches; fine sandy loam
E--6 to 9 inches; fine sandy loam
Bt--9 to 43 inches; clay loam
Bk--43 to 80 inches; loam

1260C--Stonelake-Nebish Complex, 6 To 12 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 55 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
Ap--0 to 7 inches; loamy sand
E--7 to 20 inches; loamy coarse sand
Bt--20 to 42 inches; very gravelly coarse sand
C--42 to 80 inches; very gravelly coarse sand

Nebish and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.0 percent
Typical profile:
Ap--0 to 3 inches; fine sandy loam
E--3 to 10 inches; fine sandy loam
Bt--10 to 29 inches; clay loam
Bk--29 to 80 inches; loam

1260E--Stonelake-Nebish Complex, 12 To 25 Percent Slopes

Component Description

Stonelake and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Shoulder
Slope range: 12 to 25 percent
Surface layer texture: Gravelly coarse sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.9 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
A--0 to 5 inches; gravelly coarse sandy loam
Bw--5 to 11 inches; very gravelly coarse sand
Bt--11 to 20 inches; very gravelly coarse sand
BC,C--20 to 80 inches; very gravelly coarse sand

Nebish and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 12 to 25 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 9.4 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
A--0 to 5 inches; fine sandy loam
EB--5 to 9 inches; fine sandy loam
Bt--9 to 27 inches; clay loam
Bk--27 to 80 inches; loam

1288--Seelyeville And Markey Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Seelyeville, ponded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 62.0 percent
Typical profile:
Oa1--0 to 15 inches; muck
Oa2,Oa3--15 to 80 inches; muck

Markey, ponded and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.8 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 27 inches; muck
A--27 to 32 inches; loamy sand
Cg--32 to 80 inches; sand

1356--Water, Miscellaneous

Component Description

Water
Extent: 100 percent of the unit

Miscellaneous water map units are not naturally occuring water areas. They are constructed and include; sewage lagoons, storm water sediment basins with a permanent pool of water, and aquaculture ponds. This map unit is not soil, no interpretations assigned.

1362B--Angus Loam, 2 To 5 Percent Slopes

Component Description

Angus and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):

More than 6.7 feet January February July August
  September
        Ponding: None
        Available water capacity to a depth of 60 inches: 10.5 inches
        Content of organic matter in the upper 10 inches: 2.5 percent
        Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

1368--Southhaven Loam, 0 To 2 Percent Slopes

  Component Description

     Southhaven and similar soils
        Extent: 90 percent of the unit
        Geomorphic description:
Outwash plain
        Position on landform:
Swales
        Slope range: 0 to 2 percent
        Surface layer texture: Loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Parent material:
Colluvium over outwash
        Flooding: None
        Wet soil moisture status is highest (depth, months):
3.5 feet April May
        Wet soil moisture status is lowest (depth, months):
More than 6.7 feet August September October
        Ponding: None
        Available water capacity to a depth of 60 inches: 11.0 inches
        Content of organic matter in the upper 10 inches: 6.0 percent
        Typical profile:
Ap,A3--0 to 48 inches; loam
Bw--48 to 62 inches; loam
2Bw--62 to 66 inches; loamy sand
2C--66 to 80 inches; sand

1377B--Dorset-Two Inlets Complex, 2 To 6 Percent Slopes

  Component Description

     Dorset and similar soils
        Extent: 70 percent of the unit
        Geomorphic description:
Hill on outwash plain
Hill on stream terrace
        Position on landform:
Shoulder
Backslope
        Slope range: 2 to 6 percent
        Surface layer texture: Sandy loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Parent material:
Outwash
        Flooding: None
        Depth to wet soil moisture status: More than 5.0 feet all year
        Ponding: None
        Available water capacity to a depth of 60 inches: 4.7 inches
        Content of organic matter in the upper 10 inches: 3.0 percent
        Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt--11 to 19 inches; sandy loam
2BC--19 to 32 inches; gravelly loamy sand
2C--32 to 80 inches; gravelly coarse sand

     Two inlets and similar soils
        Extent: 20 percent of the unit
        Geomorphic description:
Hill on outwash plain
Hill on stream terrace
        Position on landform:

Shoulder
Slope range: 2 to 6 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 9 inches; loamy sand
Bt--9 to 19 inches; gravelly loamy sand
C--19 to 80 inches; gravelly sand

1377C--Dorset-Two Inlets Complex, 6 To 12 Percent Slopes

Component Description

Dorset and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap,A--0 to 11 inches; sandy loam
Bt--11 to 19 inches; sandy loam
2BC--19 to 32 inches; gravelly loamy sand
2C--32 to 80 inches; gravelly coarse sand

Two inlets and similar soils
Extent: 35 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 6 to 12 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 9 inches; loamy sand
Bt--9 to 19 inches; gravelly loamy sand
C--19 to 80 inches; gravelly sand

1377D--Dorset-Two Inlets Complex, 12 To 20 Percent Slopes

Component Description

Dorset and similar soils
Extent: 45 percent of the unit

Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Backslope
Summit
Slope range: 12 to 20 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.0 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
Ap--0 to 9 inches; sandy loam
Bt--9 to 14 inches; sandy loam
2Bt,2BC--14 to 25 inches; gravelly loamy sand
2C--25 to 80 inches; gravelly sand

Two inlets and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 12 to 20 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.2 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
Ap--0 to 9 inches; loamy sand
Bt--9 to 19 inches; gravelly loamy sand
C--19 to 80 inches; gravelly sand

1377E--Dorset-Two Inlets Complex, 20 To 35 Percent Slopes

Component Description

Dorset and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Summit
Backslope
Slope range: 20 to 35 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
A--0 to 9 inches; sandy loam
Bt--9 to 14 inches; coarse sandy loam
2BC--14 to 27 inches; loamy sand
2C--27 to 80 inches; gravelly sand

Two inlets and similar soils

Extent: 45 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Slope range: 20 to 35 percent
Surface layer texture: Loamy sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 3.3 inches
Content of organic matter in the upper 10 inches: 0.7 percent
Typical profile:
A--0 to 8 inches; loamy sand
BE,Bt--8 to 20 inches; loamy sand
BC,C--20 to 80 inches; gravelly sand

1378--Fordum Loam, 0 To 2 Percent Slopes, Occasionally Flooded

Component Description

Fordum, occasionally flooded and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Occasional March April May June July August
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.3 feet September
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
Ap--0 to 9 inches; loam
Cg--9 to 38 inches; loam
2Cg--38 to 80 inches; stratified sand to silt loam

1379B--Dorset-Almora Complex, 1 To 4 Percent Slopes

Component Description

Dorset and similar soils
Extent: 65 percent of the unit
Geomorphic description:
Hill on outwash plain
Hill on stream terrace
Position on landform:
Shoulder
Backslope
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 5.0 feet all year
Ponding: None

Available water capacity to a depth of 60 inches: 5.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; loam
Bt--9 to 21 inches; loam
2Bt--21 to 26 inches; gravelly loamy sand
2C--26 to 80 inches; gravelly sand

Almora and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats
Slope range: 1 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 7.7 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap--0 to 10 inches; loam
BE--10 to 14 inches; fine sandy loam
Bt--14 to 36 inches; loam
2Bt--36 to 41 inches; loamy sand
2C--41 to 80 inches; gravelly coarse sand

1380A--Bygland Silt Loam, Map>25, 0 To 2 Percent Slopes

Component Description

Bygland, map>25 and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bt--9 to 23 inches; silty clay
BC--23 to 27 inches; silt loam
C--27 to 80 inches; stratified silt loam to silty clay loam

1380B--Bygland Silt Loam, Map>25, 2 To 6 Percent Slopes

Component Description

Bygland, map>25 and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Hill on lake plain
Position on landform:
Summit
Shoulder
Backslope
Slope range: 2 to 6 percent

Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
Ap--0 to 9 inches; silt loam
Bt--9 to 23 inches; silty clay
BC--23 to 27 inches; silt loam
C--27 to 80 inches; stratified silt loam to silty clay loam

Additional Components

Lindaas, sandy substratum: 15 percent of the unit

1380C--Bygland Silt Loam, Map>25, 6 To 12 Percent Slopes, Eroded

Component Description

Bygland, map>25 and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Hill on lake plain
Position on landform:
Shoulder
Backslope
Summit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciolacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February March June July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 0.9 percent
Typical profile:
Ap--0 to 7 inches; silt loam
Bt--7 to 20 inches; silty clay
BC--20 to 26 inches; silt loam
C--26 to 80 inches; stratified silt loam to silty clay loam

Additional Components

Lindaas, sandy substratum: 15 percent of the unit

1381--Lindaas Silt Loam, Morainic, 0 To 2 Percent Slopes

Component Description

Lindaas, moranic and similar soils
Extent: 80 percent of the unit
Geomorphic description:
Lake plain
Position on landform:
Flats and swales
Slope range: 0 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine sediments

Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.5 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 8.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,A--0 to 16 inches; silt loam
Btg--16 to 32 inches; silty clay
Cg--32 to 80 inches; silty clay loam

1383A--Shorewood Silty Clay Loam, Moderately Wet, 0 To 3 Percent Slopes

Component Description

Shorewood, moderately wet and similar soils
Extent: 95 percent of the unit
Geomorphic description:
Moraine
Lake plain
Position on landform:
Flats
Slope range: 0 to 3 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 foot April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A,AB--0 to 17 inches; silty clay loam
Bt--17 to 39 inches; silty clay
2BCg,2Cg--39 to 60 inches; loam

1388B--Terril Loam, Moderately Wet, 2 To 6 Percent Slopes

Component Description

Terril, moderately wet and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Footslope
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
Ap,A1--0 to 27 inches; loam
A2,BA--27 to 40 inches; loam
Bw--40 to 63 inches; loam
C--63 to 80 inches; loam

1406--Medo, Dassel, And Biscay Soils, Ponded, 0 To 1 Percent Slopes

Component Description

Medo, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Muck
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Organic material over outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 70.0 percent
Typical profile:
Oa--0 to 20 inches; muck
2A--20 to 34 inches; loam
2AC,2Cg--34 to 60 inches; sand

Dassel, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 8.0 percent
Typical profile:
A1,A3--0 to 23 inches; fine sandy loam
Bg--23 to 31 inches; stratified loamy fine sand to fine sandy loam
2Cg--31 to 60 inches; stratified coarse sand to loamy sand

Biscay, ponded and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Outwash plain
Stream terrace
Position on landform:
Depressions
Slope range: 0 to 1 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months):
0.5 foot August
Ponding is deepest (depth, months):
3.0 feet March April May
Available water capacity to a depth of 60 inches: 6.9 inches

Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
A1,AB--0 to 24 inches; loam
Bg--24 to 29 inches; loam
2BCg,2Cg--29 to 60 inches; stratified gravelly coarse sand to loamy sand

1408B--Angus-Kilkenny Complex, 2 To 6 Percent Slopes

Component Description

Angus and similar soils
Extent: 45 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Backslope
Summit
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

Kilkenny and similar soils
Extent: 40 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Shoulder
Summit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.7 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 11 inches; clay loam
Bt--11 to 35 inches; clay loam
2Bk,2C--35 to 80 inches; loam

1438B--Braham Loamy Fine Sand, Moderately Wet, 2 To 5 Percent Slopes

Component Description

Braham, moderately wet and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope

Slope range: 2 to 5 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 5.0 feet January February June July
August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
Ap--0 to 8 inches; loamy fine sand
E--8 to 24 inches; loamy fine sand
2Bt--24 to 42 inches; sandy clay loam
2Bk--42 to 60 inches; loam

1443--Belleville Sandy Loam, 0 To 2 Percent Slopes

Component Description

Belleville and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Beach on moraine
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April
Wet soil moisture status is lowest (depth, months):
2.0 feet August
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
Ap--0 to 11 inches; sandy loam
Bg--11 to 27 inches; loamy sand
2Bg--27 to 48 inches; loam
2Cg--48 to 80 inches; loam

1901B--Angus-Le Sueur Complex, 1 To 5 Percent Slopes

Component Description

Angus and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Hill on moraine
Position on landform:
Summit
Backslope
Slope range: 2 to 5 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
3.6 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet January February July August
September
Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
Ap--0 to 8 inches; loam
Bt--8 to 35 inches; clay loam
BC--35 to 40 inches; clay loam
C--40 to 80 inches; loam

Le sueur and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Flats and slight rises
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Till
Flooding: None
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
More than 6.7 feet February August
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
Ap,AB--0 to 14 inches; loam
Bt--14 to 40 inches; clay loam
Bk--40 to 55 inches; loam
C--55 to 80 inches; loam

1931--Essexville Sandy Loam, 0 To 2 Percent Slopes

Component Description

Essexville and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Beach on moraine
Position on landform:
Flats
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material:
Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months):
0.5 foot April May
Wet soil moisture status is lowest (depth, months):
2.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
Ap,A--0 to 15 inches; sandy loam
Bg--15 to 30 inches; sand
2Cg--30 to 80 inches; loam

Additional Components

Belleville: 15 percent of the unit

1942--Forada Mucky Loam, Depressional, 0 To 1 Percent Slopes

Component Description

Forada, depressional and similar soils
Extent: 85 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:

Depression
Slope range: 0 to 1 percent
Surface layer texture: Mucky loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.5 feet February
Ponding is shallowest (depth, months):
0.5 foot June
Ponding is deepest (depth, months):
1.0 foot March April May
Available water capacity to a depth of 60 inches: 6.2 inches
Content of organic matter in the upper 10 inches: 10.0 percent
Typical profile:
A--0 to 10 inches; mucky loam
Bg--10 to 21 inches; sandy loam
2BCg,2Cg--21 to 60 inches; gravelly coarse sand

1946--Fordum-Winterfield Complex, 0 To 2 Percent Slopes, Frequently Flooded

Component Description

Fordum, frequently flooded and similar soils
Extent: 70 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Concave drainageways
Slope range: 0 to 1 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April May June
Wet soil moisture status is highest (depth, months):
At the surface April May June
Wet soil moisture status is lowest (depth, months):
1.8 feet February
Ponding: None
Available water capacity to a depth of 60 inches: 6.6 inches
Content of organic matter in the upper 10 inches: 6.6 percent
Typical profile:
A--0 to 7 inches; fine sandy loam
Cg--7 to 28 inches; sandy loam
2Cg--28 to 80 inches; sand

Winterfield, frequently flooded and similar soils
Extent: 20 percent of the unit
Geomorphic description:
Flood plain
Position on landform:
Slight rises
Slope range: 0 to 2 percent
Surface layer texture: Loamy fine sand
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material:
Alluvium
Flooding does not occur (months):
January February September October November December
Flooding is most likely (frequency, months):
Frequent March April
Wet soil moisture status is highest (depth, months):
1.5 feet April
Wet soil moisture status is lowest (depth, months):
4.5 feet September
Ponding: None

Available water capacity to a depth of 60 inches: 4.7 inches
Content of organic matter in the upper 10 inches: 1.7 percent
Typical profile:
A--0 to 8 inches; loamy fine sand
C1,C2--8 to 20 inches; sand
C3,C5--20 to 80 inches; sand

1975--Oylen Sandy Loam, 0 To 2 Percent Slopes

Component Description

Oylen and similar soils
Extent: 90 percent of the unit
Geomorphic description:
Stream terrace
Outwash plain
Position on landform:
Flats and slight rises
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material:
Outwash
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May
Wet soil moisture status is lowest (depth, months):
4.0 feet February August September
Ponding: None
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
Ap--0 to 10 inches; sandy loam
Bt--10 to 18 inches; sandy loam
2Bw--18 to 38 inches; sand
2C--38 to 80 inches; gravelly coarse sand

W--Water

Component Description

Water
Extent: 100 percent of the unit

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DATABASE is being Updated
SUBJECT TO CHANGE
07/29/2002

Soil Descriptions - Non Technical

6--Aastad Clay Loam, 0 To 2 Percent Slopes

Component Description

Aastad and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 12 inches; clay loam
H2--12 to 27 inches; clay loam
H3--27 to 60 inches; clay loam

31E--Storden Loam, 18 To 25 Percent Slopes

Component Description

Storden and similar soils
Extent: 100 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 15 inches; loam
H3--15 to 60 inches; loam

31F--Storden Loam, 25 To 40 Percent Slopes

Component Description

Storden and similar soils
Extent: 100 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.1 percent
Typical profile:
H1--0 to 6 inches; loam
H2--6 to 15 inches; loam
H3--15 to 60 inches; loam

33B--Barnes Loam, 1 To 4 Percent Slopes

Component Description

Barnes and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 17 inches; loam
H3--17 to 60 inches; loam

33B2--Barnes Loam, 3 To 6 Percent Slopes, Eroded

Component Description

Barnes and similar soils
Extent: 100 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 17 inches; loam
H3--17 to 60 inches; loam

35--Blue Earth Silt Loam

Component Description

Blue earth and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
H1--0 to 8 inches; silt loam
H2--8 to 37 inches; mucky silt loam
H3--37 to 60 inches; clay loam

36--Flom Clay Loam

Component Description

Flom and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained

Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 28 inches; clay loam
H2--28 to 42 inches; clay loam
H3--42 to 60 inches; clay loam

85--Calco Silty Clay Loam, Occasionally Flooded

Component Description

Calco and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Occasional February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
0.5 foot January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 32 inches; silty clay loam
H3--32 to 60 inches; silty clay loam

86--Canisteo Clay Loam

Component Description

Canisteo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 19 inches; clay loam
H2--19 to 33 inches; clay loam
H3--33 to 60 inches; loam

94B--Terril Loam, 2 To 6 Percent Slopes

Component Description

Terril and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 24 inches; loam
H2--24 to 30 inches; loam
H3--30 to 60 inches; loam

94C--Terril Loam, 6 To 12 Percent Slopes

Component Description

Terril and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 24 inches; loam
H2--24 to 30 inches; loam
H3--30 to 60 inches; loam

108--Mcintosh Silt Loam, 1 To 3 Percent Slopes

Component Description

Mcintosh and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 2 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet April May June July August
September October November
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 14 inches; silt loam
H2--14 to 24 inches; silt loam
H3--24 to 60 inches; loam

113--Webster Clay Loam

Component Description

Webster and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):

1.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 19 inches; clay loam
H2--19 to 26 inches; loam
H3--26 to 60 inches; loam

114--Glencoe Clay Loam

Component Description

Glencoe and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July October November
December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 6.4 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 33 inches; clay loam
H3--33 to 44 inches; clay loam
H4--44 to 60 inches; clay loam

127A--Sverdrup Fine Sandy Loam, 0 To 2 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:
H1--0 to 8 inches; fine sandy loam
H2--8 to 18 inches; sandy loam
H3--18 to 60 inches; fine sand

127B--Sverdrup Fine Sandy Loam, 2 To 6 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.6 percent
Typical profile:

H1--0 to 8 inches; fine sandy loam
H2--8 to 18 inches; sandy loam
H3--18 to 60 inches; fine sand

127C--Sverdrup Sandy Loam, 6 To 12 Percent Slopes

Component Description

Sverdrup and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 17 inches; sandy loam
H3--17 to 60 inches; fine sand

134--Okoboji Silty Clay Loam

Component Description

Okoboji and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 8.5 percent
Typical profile:
H1--0 to 10 inches; silty clay loam
H2--10 to 34 inches; silty clay loam
H3--34 to 60 inches; silty clay loam

137--Dovray Silty Clay

Component Description

Dovray and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status: At the surface all year
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 9.3 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 12 inches; silty clay
H2--12 to 25 inches; silty clay
H3--25 to 42 inches; silty clay
H4--42 to 60 inches; silty clay loam

140--Spicer Silty Clay Loam

Component Description

Spicer and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 38 inches; silty clay loam
H3--38 to 60 inches; silt loam

141A--Egeland Loam, 0 To 2 Percent Slopes

Component Description

Egeland and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 48 inches; sandy loam
H3--48 to 60 inches; loamy fine sand

141B--Egeland Loam, 2 To 6 Percent Slopes

Component Description

Egeland and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 7.5 inches
Content of organic matter in the upper 10 inches: 2.0 percent
Typical profile:
H1--0 to 10 inches; loam
H2--10 to 48 inches; sandy loam
H3--48 to 60 inches; loamy fine sand

160--Fieldon Fine Sandy Loam

Component Description

Fieldon and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Fine sandy loam
Depth to restrictive feature:

Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 6.4 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; fine sandy loam
H2--17 to 28 inches; fine sandy loam
H3--28 to 60 inches; stratified fine sand to fine sandy loam

168B--Forman Clay Loam, 2 To 4 Percent Slopes

Component Description

Forman and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 21 inches; clay loam
H3--21 to 60 inches; clay loam

168B2--Forman Clay Loam, 3 To 6 Percent, Eroded

Component Description

Forman and similar soils
Extent: 100 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.2 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 21 inches; clay loam
H3--21 to 60 inches; clay loam

184--Hamerly Loam, 1 To 3 Percent Slopes

Component Description

Hamerly and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.5 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:
H1--0 to 15 inches; loam
H2--15 to 35 inches; loam
H3--35 to 60 inches; loam

210--Fulda Silty Clay

Component Description

Fulda and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
H1--0 to 19 inches; silty clay
H2--19 to 28 inches; silty clay
H3--28 to 60 inches; silty clay

212--Sinai Silty Clay, 1 To 3 Percent Slopes

Component Description

Sinai and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 8.7 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; silty clay
H2--13 to 17 inches; silty clay
H3--17 to 25 inches; silty clay
H4--25 to 60 inches; stratified silty clay to silt loam

236--Vallers Clay Loam

Component Description

Vallers and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March July
August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:

H1--0 to 16 inches; clay loam
H2--16 to 23 inches; clay loam
H3--23 to 60 inches; clay loam

246--Marysland Clay Loam

Component Description

Marysland and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 6.5 percent
Typical profile:
H1--0 to 20 inches; clay loam
H2--20 to 28 inches; loam
H3--28 to 60 inches; stratified coarse sand to gravelly coarse sand to fine sand to fine sand

276--Oldham Silty Clay Loam

Component Description

Oldham and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 10.0 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
H1--0 to 17 inches; silty clay loam
H2--17 to 43 inches; silty clay loam
H3--43 to 60 inches; clay loam

284B--Poinsett Clay Loam, 2 To 6 Percent Slopes

Component Description

Poinsett and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; clay loam
H2--13 to 28 inches; clay loam

H3--28 to 60 inches; silty clay loam
H4--60 to 64 inches; clay loam

290B--Rothsay Silt Loam, 1 To 4 Percent Slopes

Component Description

Rothsay and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 4 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 24 inches; silt loam
H3--24 to 49 inches; silt loam
H4--49 to 60 inches; silt loam

290B2--Rothsay Silt Loam, 3 To 6 Percent Slopes, Eroded

Component Description

Rothsay and similar soils
Extent: 100 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 24 inches; silt loam
H3--24 to 49 inches; silt loam
H4--49 to 60 inches; silt loam

319--Barbert Silt Loam

Component Description

Barbert and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Depression
Slope range: 0 to 1 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
At the surface January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: At 0.5 foot all year
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; silt loam
H2--13 to 40 inches; silty clay loam
H3--40 to 60 inches; silty clay

338--Waubay Clay Loam, 1 To 3 Percent Slopes

Component Description

Waubay and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.3 feet January February March April May
June October November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 5.4 percent
Typical profile:
H1--0 to 8 inches; clay loam
H2--8 to 25 inches; silty clay loam
H3--25 to 40 inches; silty clay loam
H4--40 to 60 inches; silt loam

339A--Fordville Loam, 0 To 2 Percent Slopes

Component Description

Fordville and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 26 inches; loam
H3--26 to 60 inches; gravelly sand

339B--Fordville Loam, 2 To 6 Percent Slopes

Component Description

Fordville and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 6.8 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 26 inches; loam
H3--26 to 60 inches; gravelly sand

341A--Arvilla Sandy Loam, 0 To 2 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.3 percent

Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 60 inches; gravelly coarse sand, coarse sand

341B--Arvilla Sandy Loam, 2 To 6 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 60 inches; gravelly coarse sand, coarse sand

341C--Arvilla Sandy Loam, 6 To 12 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 100 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 60 inches; gravelly coarse sand, coarse sand

347--Malachy Loam

Component Description

Malachy and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet January February March April
November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet May June July August September
October
Ponding: None
Available water capacity to a depth of 60 inches: 7.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 17 inches; loam
H2--17 to 27 inches; sandy loam
H3--27 to 60 inches; sand

371--Clontarf Sandy Loam, 1 To 3 Percent Slopes

Component Description

Clontarf and similar soils

Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.0 feet January February March April May
June November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet July August September October
Ponding: None
Available water capacity to a depth of 60 inches: 6.9 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 13 inches; sandy loam
H2--13 to 30 inches; sandy loam
H3--30 to 60 inches; loamy sand

402D--Sioux Gravelly Sandy Loam, 2 To 40 Percent Slopes

Component Description

Sioux and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 40 percent
Surface layer texture: Gravelly sandy loam, sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 7 inches; gravelly sandy loam, sandy loam
H2--7 to 10 inches; gravelly loamy sand
H3--10 to 60 inches; very gravelly sand

421B--Ves Loam, 1 To 4 Percent Slopes

Component Description

Ves and similar soils
Extent: 100 percent of the unit
Slope range: 2 to 4 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.8 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 12 inches; loam
H2--12 to 24 inches; clay loam
H3--24 to 38 inches; loam
H4--38 to 60 inches; loam

423--Seaforth Loam, 1 To 3 Percent Slopes

Component Description

Seaforth and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 14 inches; loam
H2--14 to 24 inches; loam
H3--24 to 60 inches; loam

434--Perella Silty Clay Loam

Component Description

Perella and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Swale
Slope range: 0 to 1 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February March April
July August September October
November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; silty clay loam
H2--20 to 33 inches; silty clay loam
H3--33 to 60 inches; silty clay loam

437E--Buse Loam, 18 To 25 Percent Slopes

Component Description

Buse and similar soils
Extent: 100 percent of the unit
Slope range: 18 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

437F--Buse Loam, 25 To 40 Percent Slopes

Component Description

Buse and similar soils
Extent: 100 percent of the unit
Slope range: 25 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None

Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

444--Canisteo Silty Clay Loam

Component Description

Canisteo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
1.0 feet January February March April May June July October November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 22 inches; silty clay loam
H2--22 to 32 inches; silty clay loam
H3--32 to 60 inches; loam

446--Normania Clay Loam, 1 To 3 Percent Slopes

Component Description

Normania and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August September October November December
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; clay loam
H2--13 to 28 inches; clay loam
H3--28 to 38 inches; loam
H4--38 to 60 inches; loam

574--Du Page Loam, Occasionally Flooded

Component Description

Du page and similar soils
Extent: 100 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February March July August September October November December
Flooding is most likely (frequency, months):

Occasional   April May June
        Wet soil moisture status is highest (depth, months):
5.0 feet   February March April May June
        Wet soil moisture status is lowest (depth, months):
More than 6.0 feet   January July August September
  October November December
        Ponding: None
        Available water capacity to a depth of 60 inches: 11.8 inches
        Content of organic matter in the upper 10 inches: 4.0 percent
        Typical profile:
H1--0 to 36 inches; loam
H2--36 to 60 inches; loam
H3--60 to 64 inches; stratified loam to gravelly sandy clay loam

575--Nishna Silty Clay, Occasionally Flooded

  Component Description

     Nishna and similar soils
        Extent: 100 percent of the unit
        Geomorphic description:
Flood plain
        Slope range: 0 to 1 percent
        Surface layer texture: Silty clay
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Poorly drained
        Flooding does not occur (months):
January December
        Flooding is most likely (frequency, months):
Occasional   February March April May June
  July August September October
  November
        Wet soil moisture status is highest (depth, months):
0.5 foot   January February March April May
  June July November December
        Wet soil moisture status is lowest (depth, months):
More than 6.0 feet   August September October
        Ponding: None
        Available water capacity to a depth of 60 inches: 7.7 inches
        Content of organic matter in the upper 10 inches: 5.0 percent
        Typical profile:
H1--0 to 48 inches; silty clay
H2--48 to 60 inches; silty clay loam

591B--Doland Silt Loam, 1 To 4 Percent Slopes

  Component Description

     Doland and similar soils
        Extent: 100 percent of the unit
        Slope range: 1 to 4 percent
        Surface layer texture: Silt loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Flooding: None
        Ponding: None
        Available water capacity to a depth of 60 inches: 11.5 inches
        Content of organic matter in the upper 10 inches: 5.0 percent
        Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 23 inches; silt loam
H3--23 to 60 inches; loam

591B2--Doland Silt Loam, 3 To 6 Percent Slopes, Eroded

  Component Description

     Doland and similar soils
        Extent: 100 percent of the unit
        Slope range: 3 to 6 percent
        Surface layer texture: Silt loam
        Depth to restrictive feature:
Very deep (more than 60 inches)
        Drainage class: Well drained
        Flooding: None

Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 5.0 percent
Typical profile:
H1--0 to 11 inches; silt loam
H2--11 to 23 inches; silt loam
H3--23 to 60 inches; loam

597--Tara Silt Loam, 1 To 3 Percent Slopes

Component Description

Tara and similar soils
Extent: 100 percent of the unit
Slope range: 1 to 3 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding: None
Wet soil moisture status is highest (depth, months):
4.0 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silt loam
H2--16 to 36 inches; silt loam
H3--36 to 60 inches; loam

610--Calco Silty Clay Loam, Frequently Flooded

Component Description

Calco and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Frequent February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
0.5 foot January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 32 inches; silty clay loam
H3--32 to 60 inches; silty clay loam

876C2--Nutley-Sinai Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Nutley and similar soils
Extent: 65 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained

Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 7.6 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 60 inches; silty clay

Sinai and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 9 percent
Surface layer texture: Silty clay
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 8.8 inches
Content of organic matter in the upper 10 inches: 4.8 percent
Typical profile:
H1--0 to 9 inches; silty clay
H2--9 to 17 inches; silty clay
H3--17 to 60 inches; stratified silty clay to silt loam

878--Calco-Du Page Complex

Component Description

Calco and similar soils
Extent: 60 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Frequent February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
0.5 foot January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 32 inches; silty clay loam
H3--32 to 60 inches; silty clay loam

Du page and similar soils
Extent: 40 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Occasional April May June
Wet soil moisture status is highest (depth, months):
5.0 feet February March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January July August September
October November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 36 inches; loam
H2--36 to 60 inches; loam

H3--60 to 64 inches; stratified loam to gravelly sandy clay loam

883--Zumbro-Du Page Complex, Occasionally Flooded

Component Description

Zumbro and similar soils
Extent: 70 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Occasional April May June
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 50 inches; loamy sand
H3--50 to 60 inches; sand

Du page and similar soils
Extent: 30 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Occasional April May June
Wet soil moisture status is highest (depth, months):
5.0 feet February March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January July August September
October November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 36 inches; loam
H2--36 to 60 inches; loam

902C2--Barnes-Buse Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Barnes and similar soils
Extent: 50 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; loam
H3--21 to 60 inches; loam

Buse and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None

Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 23 inches; loam
H3--23 to 60 inches; loam

904B2--Arvilla-Barnes-Buse Complex, 2 To 6 Percent Slopes, Eroded

Component Description

Arvilla and similar soils
Extent: 40 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 60 inches; gravelly coarse sand, coarse sand

Barnes and similar soils
Extent: 35 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 23 inches; loam
H3--23 to 60 inches; loam

Buse and similar soils
Extent: 25 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 23 inches; loam
H3--23 to 60 inches; loam

904C--Arvilla-Buse-Barnes Complex, 6 To 12 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 2.2 percent
Typical profile:
H1--0 to 7 inches; sandy loam
H2--7 to 15 inches; sandy loam

H3--15 to 60 inches; gravelly coarse sand, coarse sand

Buse and similar soils
Extent: 35 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Barnes and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 19 inches; loam
H3--19 to 60 inches; loam

913D--Buse-Barnes Loams, 12 To 18 Percent Slopes

Component Description

Buse and similar soils
Extent: 65 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 23 inches; loam
H3--23 to 60 inches; loam

Barnes and similar soils
Extent: 35 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.7 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 19 inches; loam
H3--19 to 60 inches; loam

915C2--Forman-Buse Complex, 6 To 12 Percent Slopes, Eroded

Component Description

Forman and similar soils
Extent: 60 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Clay loam

Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 4.9 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 17 inches; clay loam
H3--17 to 60 inches; clay loam

Buse and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; clay loam

915D--Buse-Forman Complex, 12 To 18 Percent Slopes

Component Description

Buse and similar soils
Extent: 60 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; clay loam

Forman and similar soils
Extent: 40 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 4.9 percent
Typical profile:
H1--0 to 7 inches; clay loam
H2--7 to 15 inches; clay loam
H3--15 to 60 inches; clay loam

917D--Buse-Sioux Complex, 12 To 18 Percent Slopes

Component Description

Buse and similar soils
Extent: 55 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches

Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Sioux and similar soils
Extent: 45 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Gravelly sandy loam, sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 7 inches; gravelly sandy loam, sandy loam
H2--7 to 10 inches; gravelly loamy sand
H3--10 to 60 inches; very gravelly sand

917E--Buse-Sioux Complex, 18 To 40 Percent Slopes

Component Description

Buse and similar soils
Extent: 50 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
H1--0 to 7 inches; loam
H2--7 to 23 inches; loam
H3--23 to 60 inches; loam

Sioux and similar soils
Extent: 50 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Gravelly sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.8 inches
Content of organic matter in the upper 10 inches: 1.8 percent
Typical profile:
H1--0 to 7 inches; gravelly sandy loam
H2--7 to 10 inches; gravelly loamy sand
H3--10 to 60 inches; very gravelly sand

923D--Copaston-Rock Outcrop Complex, 2 To 25 Percent Slopes

Component Description

Copaston and similar soils
Extent: 60 percent of the unit
Slope range: 2 to 25 percent
Surface layer texture: Loam
Depth to restrictive feature:
Bedrock (lithic): 12 to 20 inches
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.6 inches
Content of organic matter in the upper 10 inches: 3.5 percent
Typical profile:
H1--0 to 15 inches; loam
H2--15 to 18 inches; gravelly sandy loam
H3--18 to 22 inches; unweathered bedrock

Rock outcrop
Extent: 40 percent of the unit

953C--Arvilla-Storden-Ves Complex, 6 To 15 Percent Slopes

Component Description

Arvilla and similar soils
Extent: 45 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 3.9 inches
Content of organic matter in the upper 10 inches: 2.3 percent
Typical profile:
H1--0 to 8 inches; sandy loam
H2--8 to 16 inches; sandy loam
H3--16 to 60 inches; gravelly coarse sand, coarse sand

Storden and similar soils
Extent: 30 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 15 inches; loam
H3--15 to 60 inches; loam

Ves and similar soils
Extent: 25 percent of the unit
Slope range: 6 to 15 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 20 inches; clay loam
H3--20 to 38 inches; loam
H4--38 to 60 inches; loam

954B2--Ves-Storden Loams, 3 To 6 Percent Slopes, Eroded

Component Description

Ves and similar soils
Extent: 65 percent of the unit
Slope range: 3 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 21 inches; clay loam
H3--21 to 38 inches; loam
H4--38 to 60 inches; loam

Storden and similar soils

Extent: 35 percent of the unit
Slope range: 4 to 6 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.4 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 15 inches; loam
H3--15 to 60 inches; loam

954C2--Storden-Ves Loams, 5 To 12 Percent Slopes, Eroded

Component Description

Storden and similar soils
Extent: 60 percent of the unit
Slope range: 5 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 15 inches; loam
H3--15 to 60 inches; loam

Ves and similar soils
Extent: 40 percent of the unit
Slope range: 5 to 12 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; clay loam
H3--21 to 38 inches; loam
H4--38 to 60 inches; loam

954D--Storden-Ves Loams, 12 To 18 Percent Slopes

Component Description

Storden and similar soils
Extent: 70 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.3 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 15 inches; loam
H3--15 to 60 inches; loam

Ves and similar soils
Extent: 30 percent of the unit
Slope range: 12 to 18 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)

Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3.4 percent
Typical profile:
H1--0 to 8 inches; loam
H2--8 to 21 inches; clay loam
H3--21 to 38 inches; loam
H4--38 to 60 inches; loam

969B2--Zell-Rothsay Silt Loams, 2 To 6 Percent Slopes, Eroded

Component Description

Zell and similar soils
Extent: 70 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 29 inches; very fine sandy loam
H3--29 to 60 inches; silt loam

Rothsay and similar soils
Extent: 30 percent of the unit
Slope range: 2 to 6 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 24 inches; silt loam
H3--24 to 49 inches; silt loam
H4--49 to 60 inches; silt loam

969C2--Zell-Rothsay Silt Loams, 6 To 12 Percent Slopes, Eroded

Component Description

Zell and similar soils
Extent: 60 percent of the unit
Slope range: 6 to 11 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.0 inches
Content of organic matter in the upper 10 inches: 3.3 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 29 inches; very fine sandy loam
H3--29 to 60 inches; silt loam

Rothsay and similar soils
Extent: 40 percent of the unit
Slope range: 6 to 12 percent
Surface layer texture: Silt loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 12.6 inches

Content of organic matter in the upper 10 inches: 4.2 percent
Typical profile:
H1--0 to 9 inches; silt loam
H2--9 to 24 inches; silt loam
H3--24 to 49 inches; silt loam
H4--49 to 60 inches; silt loam

1016--Udorthents, Loamy

Component Description

Udorthents and similar soils
Extent: 100 percent of the unit
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

1029--Pits, Gravel

Component Description

Pits
Extent: 100 percent of the unit

1053--Aquolls And Aquents, Ponded

Component Description

Aquents and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Depth to restrictive feature:
Very deep (more than 60 inches)
Flooding: None
Ponding: None

Aquolls and similar soils
Extent: 50 percent of the unit
Geomorphic description:
Depression
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Very poorly drained
Flooding: None
Wet soil moisture status: At 1.5 feet all year
Ponding: None

1852F--Terril-Swanlake Loams, 18 To 70 Percent Slopes

Component Description

Swanlake and similar soils
Extent: 50 percent of the unit
Slope range: 18 to 70 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Well drained
Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 2.8 percent
Typical profile:
H1--0 to 9 inches; loam
H2--9 to 33 inches; loam
H3--33 to 60 inches; loam

Terril and similar soils
Extent: 50 percent of the unit
Slope range: 18 to 40 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained

Flooding: None
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 24 inches; loam
H2--24 to 30 inches; loam
H3--30 to 60 inches; loam

1867--Zumbro-Calco Complex

Component Description

Zumbro and similar soils
Extent: 70 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Sandy loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Frequent April May June
Ponding: None
Available water capacity to a depth of 60 inches: 6.5 inches
Content of organic matter in the upper 10 inches: 3.0 percent
Typical profile:
H1--0 to 10 inches; sandy loam
H2--10 to 50 inches; loamy sand
H3--50 to 60 inches; sand

Calco and similar soils
Extent: 30 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Frequent February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
0.5 foot January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Available water capacity to a depth of 60 inches: 12.3 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 16 inches; silty clay loam
H2--16 to 32 inches; silty clay loam
H3--32 to 60 inches; silty clay loam

1868--Canisteo Stony Clay Loam

Component Description

Canisteo and similar soils
Extent: 100 percent of the unit
Geomorphic description:
Flat
Slope range: 0 to 2 percent
Surface layer texture: Stony clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
2.0 feet January February March April May
June July October November

December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 20 inches; stony clay loam
H2--20 to 31 inches; clay loam
H3--31 to 60 inches; loam

1869--Du Page-Mcintosh Variant Loams

Component Description

Du page variant and similar soils
Extent: 60 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Moderately well drained
Flooding does not occur (months):
January February March July August September October
November December
Flooding is most likely (frequency, months):
Occasional April May June
Wet soil moisture status is highest (depth, months):
5.0 feet February March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January July August September
October November December
Ponding: None
Available water capacity to a depth of 60 inches: 11.8 inches
Content of organic matter in the upper 10 inches: 4.0 percent
Typical profile:
H1--0 to 36 inches; loam
H2--36 to 60 inches; loam
H3--60 to 64 inches; stratified loam to gravelly sandy clay loam

Mcintosh variant and similar soils
Extent: 40 percent of the unit
Slope range: 0 to 2 percent
Surface layer texture: Loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Flooding: None
Wet soil moisture status is highest (depth, months):
3.2 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 6.0 percent
Typical profile:
H1--0 to 13 inches; loam
H2--13 to 43 inches; loam
H3--43 to 60 inches; stratified loam to silty clay loam

1870--Burr-Calco Silty Clay Loams

Component Description

Burr and similar soils
Extent: 75 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January February July August September October November
December

Flooding is most likely (frequency, months):
Occasional March April May June
Wet soil moisture status is highest (depth, months):
2.0 feet March April May June
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet January February July August
September October November
December
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5.6 percent
Typical profile:
H1--0 to 7 inches; silty clay loam
H2--7 to 30 inches; silty clay
H3--30 to 60 inches; stratified silt loam to clay

Calco and similar soils
Extent: 25 percent of the unit
Geomorphic description:
Flood plain
Slope range: 0 to 2 percent
Surface layer texture: Silty clay loam
Depth to restrictive feature:
Very deep (more than 60 inches)
Drainage class: Poorly drained
Flooding does not occur (months):
January December
Flooding is most likely (frequency, months):
Occasional February March April May June
July August September October
November
Wet soil moisture status is highest (depth, months):
0.5 foot January February March April May
June July November December
Wet soil moisture status is lowest (depth, months):
More than 6.0 feet August September October
Ponding: None
Content of organic matter in the upper 10 inches: 6.0 percent

CW--Census Water

Component Description

Water
Extent: 100 percent of the unit