

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:

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: 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

Graycalm and similar soils

Extent: 5 percent of the unit

Huntersville and similar soils

Extent: 5 percent of the unit

Rockwood and similar soils

Extent: 5 percent of the unit

Staples and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

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

Graycalm and similar soils

Extent: 10 percent of the unit

Huntersville and similar soils

Extent: 5 percent of the unit

Staples and similar soils

Extent: 3 percent of the unit

Geomorphic description:

Swale

Rockwood and similar soils

Extent: 2 percent of the unit

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

Sol and similar soils

Extent: 5 percent of the unit

Spooner and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Graycalm and similar soils

Extent: 3 percent of the unit

Cathro and similar soils

Extent: 2 percent of the unit

Geomorphic description:

Depression

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:

Backslope

Shoulder

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

Sol and similar soils

Extent: 5 percent of the unit

Spooner and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Graycalm and similar soils

Extent: 3 percent of the unit

Cathro and similar soils

Extent: 2 percent of the unit

Geomorphic description:

Depression

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

Blowers and similar soils
Extent: 5 percent of the unit

Redeye and similar soils
Extent: 5 percent of the unit

Staples and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils
Extent: 5 percent of the unit

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

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Baudette and similar soils
Extent: 3 percent of the unit

Cathro and similar soils
Extent: 2 percent of the unit
Geomorphic description:
Depression

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

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Wurtsmith and similar soils
Extent: 5 percent of the unit

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

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Wurtsmith and similar soils
Extent: 5 percent of the unit

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

Debs and similar soils
Extent: 5 percent of the unit

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Spooner and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

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

Braham and similar soils
Extent: 5 percent of the unit

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Talmoon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

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:
Swale on outwash plain
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 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

Markey and similar soils

Extent: 5 percent of the unit
Geomorphic description:
Depression

Roscommon and similar soils

Extent: 5 percent of the unit
Geomorphic description:
Depression

Wurtsmith and similar soils

Extent: 5 percent of the unit

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:
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 6.0 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

Duelm and similar soils

Extent: 5 percent of the unit

Verndale and similar soils

Extent: 5 percent of the unit

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:

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 6.0 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

Duelm and similar soils

Extent: 5 percent of the unit

Verndale and similar soils

Extent: 5 percent of the unit

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:

Shoulder

Backslope

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

Duelm and similar soils

Extent: 5 percent of the unit

Verndale and similar soils

Extent: 5 percent of the unit

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

Isan and similar soils

Extent: 15 percent of the unit
Geomorphic description:
Depression

Nymore and similar soils

Extent: 3 percent of the unit

Verndale and similar soils

Extent: 2 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

Duelm and similar soils

Extent: 5 percent of the unit

Nidaros and similar soils

Extent: 5 percent of the unit

Geomorphic description:
Depression

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:

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: 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

Cathro and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Depression

Egglake and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Nary and similar soils

Extent: 5 percent of the unit

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

Beltrami and similar soils
Extent: 5 percent of the unit

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

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

Corliss and similar soils
Extent: 5 percent of the unit

Duelm and similar soils
Extent: 5 percent of the unit

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

Blowers and similar soils
Extent: 5 percent of the unit

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Runeberg and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

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:
Summit
Backslope
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

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

Potatolake and similar soils

Extent: 5 percent of the unit

Egglake and similar soils

Extent: 3 percent of the unit
Geomorphic description:
 Swale

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):

Extent: 45 percent of the unit
Geomorphic description:
Moraine
Position on landform:
Backslope
Summit
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

Seelyeville and similar soils

Extent: 10 percent of the unit
Geomorphic description:
Depression

Egglake and similar soils

Extent: 5 percent of the unit
Geomorphic description:
Swale

Potatolake and similar soils

Extent: 3 percent of the unit

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

Beltrami and similar soils
 Extent: 5 percent of the unit

Cathro and similar soils
 Extent: 5 percent of the unit
 Geomorphic description:
 Depression

672--Willossippi Loam, 0 To 2 Percent Slopes

Component Description

Willossippi 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;

Cathro and similar soils
 Extent: 5 percent of the unit
 Geomorphic description:
 Depression

Zerkel and similar soils
 Extent: 5 percent of the unit

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

Steamboat and similar soils

Extent: 20 percent of the unit

Geomorphic description:

Moraine

Position on landform:

Backslope

Footslope

Slope range: 3 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: 8.2 inches

Content of organic matter in the upper 10 inches: 0.8 percent

Typical profile:

A--0 to 3 inches; fine 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

Wurtsmith and similar soils
Extent: 5 percent of the unit

Potatolake and similar soils
Extent: 3 percent of the unit

Seelyeville and similar soils
Extent: 2 percent of the unit
Geomorphic description:
Depression

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

Wurtsmith and similar soils
Extent: 5 percent of the unit

Potatolake and similar soils
Extent: 3 percent of the unit

Seelyeville and similar soils
Extent: 2 percent of the unit
Geomorphic description:
Depression

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

Becida and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Cathro and similar soils
Extent: 3 percent of the unit
Geomorphic description:
Depression

Blowers and similar soils
Extent: 2 percent of the unit

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;

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Sol and similar soils
Extent: 5 percent of the unit

Willosippi and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Zerkel and similar soils
Extent: 5 percent of the unit

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:
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:
 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;

Cathro and similar soils
 Extent: 5 percent of the unit
 Geomorphic description:
 Depression

Sol and similar soils
 Extent: 5 percent of the unit

Willossippi and similar soils
 Extent: 5 percent of the unit
 Geomorphic description:
 Swale

Zerkel and similar soils
 Extent: 5 percent of the unit

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

Isan and similar soils
 Extent: 5 percent of the unit
 Geomorphic description:
 Depression

Meehan and similar soils

Extent: 5 percent of the unit

Nidaros and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Depression

Spooner and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

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

Graycalm and similar soils

Extent: 5 percent of the unit

Wurtsmith and similar soils

Extent: 5 percent of the unit

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:

Moraine

Lake plain

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;

Baudette and similar soils

Extent: 8 percent of the unit

Wurtsmith and similar soils

Extent: 7 percent of the unit

Spooner and similar soils

Extent: 3 percent of the unit

Geomorphic description:

Swale

Zimmerman and similar soils

Extent: 2 percent of the unit

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

Seelyeville and similar soils
Extent: 10 percent of the unit
Geomorphic description:
Depression

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:
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 6.0 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

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils
Extent: 5 percent of the unit

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

Roscommon and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Wurtsmith and similar soils

Extent: 5 percent of the unit

778B--Dorset-Corliss Complex, 1 To 6 Percent Slopes

Component Description

Dorset and similar soils

Extent: 60 percent of the unit

Geomorphic description:

Valley train

Outwash plain

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

Duelm and similar soils

Extent: 10 percent of the unit

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

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

Cathro and similar soils
Extent: 10 percent of the unit
Geomorphic description:
Depression

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

Extent: 85 percent of the unit
Geomorphic description:
Moraine
Lake plain
Outwash plain
Position on landform:
Foothills
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

Debs and similar soils
Extent: 5 percent of the unit

Steamboat and similar soils
Extent: 5 percent of the unit

Willossippi and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

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:
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: 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

Zimmerman and similar soils

Extent: 10 percent of the unit

Baudette and similar soils

Extent: 2 percent of the unit

Wurtsmith and similar soils

Extent: 2 percent of the unit

Spooner and similar soils

Extent: 1 percent of the unit

Geomorphic description:

Swale

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:

Summit

Backslope

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

Zimmerman and similar soils

Extent: 10 percent of the unit

Baudette and similar soils

Extent: 2 percent of the unit

Wurtsmith and similar soils

Extent: 2 percent of the unit

Spooner and similar soils

Extent: 1 percent of the unit

Geomorphic description:

Swale

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:

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: 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:

Backslope

Shoulder

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

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils
Extent: 5 percent of the unit

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:
Summit
Backslope
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

Roscommon and similar soils

Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils

Extent: 5 percent of the unit

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:
Summit
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: 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

Roscommon and similar soils

Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils

Extent: 5 percent of the unit

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

Roscommon and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Wurtsmith and similar soils

Extent: 5 percent of the unit

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

Roscommon and similar soils

Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils

Extent: 5 percent of the unit

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

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils
Extent: 5 percent of the unit

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

Roscommon and similar soils
Extent: 10 percent of the unit
Geomorphic description:
Flood plain

Seelyeville and similar soils
Extent: 10 percent of the unit
Geomorphic description:
Flood plain

Bowstring and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Flood plain

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

Runeberg and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Depression

Willossippi and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

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:
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 6.0 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

Duelm and similar soils

Extent: 10 percent of the unit

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

Roscommon and similar soils

Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils

Extent: 5 percent of the unit

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:
Foothlope
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

Roscommon and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Wurtsmith and similar soils

Extent: 5 percent of the unit

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
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Ponding does not occur (months):

August September

Ponding is deepest (depth, months):

0.5 foot	April	May	June	October
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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

Roscommon and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Depression

Seelyeville and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Depression

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;

Lengby and similar soils

Extent: 5 percent of the unit

Nary and similar soils

Extent: 5 percent of the unit

Willosippi and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

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

Cathro and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Depression

Nary and similar soils

Extent: 5 percent of the unit

Steamboat and similar soils

Extent: 5 percent of the unit

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

Roscommon and similar soils

Extent: 5 percent of the unit
Geomorphic description:
 Depression

Seelyeville and similar soils

Extent: 5 percent of the unit
Geomorphic description:
 Depression

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

Wurtsmith and similar soils

Extent: 3 percent of the unit

Roscommon and similar soils

Extent: 2 percent of the unit
Geomorphic description:
Swale

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

Wurtsmith and similar soils

Extent: 3 percent of the unit

Roscommon and similar soils

Extent: 2 percent of the unit

Geomorphic description:

Swale

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

Cathro and similar soils

Extent: 10 percent of the unit

Geomorphic description:

Depression

Egglake and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Nary and similar soils

Extent: 5 percent of the unit

Debs and similar soils

Extent: 3 percent of the unit

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:

Shoulder
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: 4.6 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

Cathro and similar soils
Extent: 10 percent of the unit
Geomorphic description:
 Depression

Egglake and similar soils
Extent: 5 percent of the unit
Geomorphic description:
 Swale

Nary and similar soils
Extent: 5 percent of the unit

Debs and similar soils
Extent: 3 percent of the unit

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

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Egglake and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Nary and similar soils
Extent: 5 percent of the unit

Debs and similar soils
Extent: 3 percent of the unit

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:
Shoulder
Summit
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:
Foothill
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

Duelm and similar soils
Extent: 10 percent of the unit

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

Duelm and similar soils
Extent: 10 percent of the unit

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

Roscommon and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Wurtsmith and similar soils

Extent: 5 percent of the unit

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

Markey and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Meehan and similar soils
Extent: 5 percent of the unit

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

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Egglake and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Nary and similar soils
Extent: 5 percent of the unit

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

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Egglake and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Sol and similar soils
Extent: 5 percent of the unit

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

Blowers and similar soils
Extent: 10 percent of the unit

Redeye and similar soils
Extent: 5 percent of the unit

Becida and similar soils
Extent: 3 percent of the unit
Geomorphic description:
Swale

Runeberg and similar soils
Extent: 2 percent of the unit
Geomorphic description:
Depression

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

Blowers and similar soils
Extent: 10 percent of the unit

Redeye and similar soils
Extent: 5 percent of the unit

Becida and similar soils
Extent: 3 percent of the unit
Geomorphic description:
Swale

Runeberg and similar soils
Extent: 2 percent of the unit
Geomorphic description:
Depression

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:
Backslope
Shoulder
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

Becida and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Blowers and similar soils

Extent: 5 percent of the unit

Redeye and similar soils

Extent: 5 percent of the unit

Runeberg and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Depression

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:

Footslope

Backslope

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

Becida and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Huntersville and similar soils

Extent: 5 percent of the unit

Rockwood and similar soils
Extent: 5 percent of the unit

Runeberg and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

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

Runeberg and similar soils
Extent: 10 percent of the unit

Geomorphic description:
Depression

Blowers and similar soils
Extent: 5 percent of the unit

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

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

Blowers and similar soils
Extent: 10 percent of the unit

Becida and similar soils
Extent: 3 percent of the unit
Geomorphic description:
Swale

Runeberg and similar soils
Extent: 2 percent of the unit
Geomorphic description:
Depression

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:
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:
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

Blowers and similar soils
Extent: 10 percent of the unit

Becida and similar soils
Extent: 3 percent of the unit
Geomorphic description:
Swale

Runeberg and similar soils
Extent: 2 percent of the unit
Geomorphic description:
Depression

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

Blowers and similar soils
Extent: 5 percent of the unit

Becida and similar soils
Extent: 3 percent of the unit
Geomorphic description:
Swale

Runeberg and similar soils
Extent: 2 percent of the unit
Geomorphic description:
Depression

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

Blowers and similar soils
Extent: 5 percent of the unit

Redeye and similar soils
Extent: 5 percent of the unit

Staples and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils
Extent: 5 percent of the unit

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

Becida and similar soils
Extent: 10 percent of the unit
Geomorphic description:
Swale

Rockwood and similar soils
Extent: 5 percent of the unit

Runeberg and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

1356--Water, Miscellaneous

Component Description

Water
Extent: 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:
Backslope
Summit
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

Becida and similar soils
Extent: 5 percent of the unit

Geomorphic description:
Swale

Blowers and similar soils
Extent: 5 percent of the unit

Graycalm and similar soils
Extent: 5 percent of the unit

Runeberg and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

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

Becida and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Blowers and similar soils
Extent: 5 percent of the unit

Graycalm and similar soils
Extent: 5 percent of the unit

Runeberg and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

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:
Summit
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

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

Graycalm and similar soils
Extent: 5 percent of the unit

Runeberg and similar soils
Extent: 5 percent of the unit
Geomorphic description:

Depression

Blowers and similar soils

Extent: 3 percent of the unit

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

Graycalm and similar soils

Extent: 10 percent of the unit

Blomford and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Nebish and similar soils

Extent: 5 percent of the unit

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

Seelyeville and similar soils
Extent: 10 percent of the unit
Geomorphic description:
Depression

Becida and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

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:
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: 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

Graycalm and similar soils
Extent: 5 percent of the unit

Huntersville and similar soils
Extent: 5 percent of the unit

Rockwood and similar soils
Extent: 5 percent of the unit

Staples and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

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

Graycalm and similar soils

Extent: 10 percent of the unit

Huntersville and similar soils

Extent: 5 percent of the unit

Staples and similar soils

Extent: 5 percent of the unit

Geomorphic description:

Swale

Rockwood and similar soils

Extent: 2 percent of the unit

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:

Rise on outwash plain
Flat on outwash plain
Rise on lake plain
Flat 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

Graycalm and similar soils

Extent: 5 percent of the unit

Meehan and similar soils

Extent: 5 percent of the unit

Roscommon and similar soils

Bt1..BC--12 to 39 inches; clay loam
C1,C2--39 to 80 inches; loam

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Nebish and similar soils
Extent: 5 percent of the unit

Talmoon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

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:
Valley train
Outwash plain
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

Graycalm and similar soils
Extent: 5 percent of the unit

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils
Extent: 5 percent of the unit

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

Graycalm and similar soils
Extent: 5 percent of the unit

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils
Extent: 5 percent of the unit

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:
Backslope
Summit
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

Graycalm and similar soils
Extent: 10 percent of the unit

Roscommon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Wurtsmith and similar soils
Extent: 5 percent of the unit

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

Beltrami and similar soils
Extent: 10 percent of the unit

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Talmoon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

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:
Shoulder
Backslope
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

Beltrami and similar soils
Extent: 10 percent of the unit

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Talmoon and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

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

Markey and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Meehan and similar soils
Extent: 5 percent of the unit

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

Becida and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Swale

Cathro and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

Huntersville and similar soils
Extent: 5 percent of the unit

Runeberg and similar soils
Extent: 5 percent of the unit
Geomorphic description:
Depression

1968--Evert Loam, 0 To 1 Percent Slopes, Occasionally Flooded

Component Description

Evert 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

Nidaros and similar soils
Extent: 10 percent of the unit
Geomorphic description:
Depression on flood plain

Duelm and similar soils
Extent: 5 percent of the unit

1969--Evert-Isan Complex, Channeled, 0 To 1 Percent Slopes, Frequently Flooded

Component Description

Evert 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

Nidaros and similar soils

Extent: 10 percent of the unit
Geomorphic description:
Depression on flood plain

Duelm and similar soils

Extent: 5 percent of the unit

W--Water

Component Description

Water

Extent: 100 percent of the unit

