Map Unit Description (MN)

Meeker County, Minnesota

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation]

8B--Sparta loamy sand, 1 to 6 percent slopes

Sparta

Extent: 90 percent of the unit
Landform(s): outwash plains
Slope gradient: 1 to 6 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .05
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	loamy sand	moderately rapid	1.45 to 1.94 in	5.1 to 7.3
Bw -- 16 to 29 in	loamy sand	rapid	0.65 to 1.43 in	5.1 to 7.3
C -- 29 to 60 in	sand	rapid	1.23 to 2.15 in	5.1 to 7.8

Darfur

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

8B--Sparta loamy sand, 1 to 6 percent slopes

Dassel

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

8C--Sparta loamy sand, 6 to 12 percent slopes

Sparta

Extent: 90 percent of the unit
Landform(s): outwash plains
Slope gradient: 6 to 12 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .05
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	loamy sand	moderately rapid	0.64 to 0.85 in	5.1 to 7.3
Bw -- 7 to 13 in	loamy fine sand	rapid	0.30 to 0.65 in	5.1 to 7.3
C -- 13 to 60 in	sand	rapid	1.87 to 3.28 in	5.1 to 7.8

Darfur

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

8D--Sparta loamy sand, 12 to 25 percent slopes

Sparta

Extent: 90 percent of the unit
Landform(s): outwash plains
Slope gradient: 12 to 25 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .05
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loamy sand	moderately rapid	0.81 to 1.09 in	5.1 to 7.3
Bw -- 9 to 40 in	loamy fine sand	rapid	1.56 to 3.42 in	5.1 to 7.3
C -- 40 to 60 in	sand	rapid	0.79 to 1.38 in	5.1 to 7.8

Darfur

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

35--Blue Earth mucky silt loam, 0 to 1 percent slopes

Blue Earth

Extent: 95 percent of the unit
Landform(s): lakebeds
Slope gradient: 0 to 1 percent
Parent material: fine-silty coprogenic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	mucky silt loam	moderate	1.42 to 1.89 in	7.4 to 8.4
C -- 8 to 60 in	mucky silt loam	moderate	9.35 to 12.47 in	7.4 to 8.4

Canisteo

Extent: 5 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

39A--Wadena loam, 0 to 2 percent slopes

Wadena

Extent: 90 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 2 percent
Parent material: fine-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	loam	moderate	2.60 to 2.86 in	6.1 to 7.3
Bw -- 13 to 29 in	loam	moderate	2.26 to 3.07 in	5.6 to 7.3
2Bk -- 29 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.61 to 1.23 in	6.6 to 8.4

Biscay

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

41A--Estherville sandy loam, 0 to 2 percent slopes

Estherville

Extent: 90 percent of the unit
Landform(s): flats on outwash plains, rises on outwash plains
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy outwash over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	sandy loam	moderately rapid	1.54 to 2.13 in	5.6 to 7.3
Bw -- 12 to 15 in	sandy loam	moderately rapid	0.41 to 0.57 in	5.6 to 7.3
2Bk -- 15 to 60 in	gravelly coarse sand	very rapid	0.90 to 1.80 in	6.6 to 8.4

Biscay

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

85--Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded

Calco, occasionally flooded

Extent: 90 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: fine-silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: occasional
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 22 in	silty clay loam	moderate	4.63 to 5.07 in	7.4 to 8.4
Bg -- 22 to 60 in	silty clay loam	moderate	7.94 to 8.69 in	7.4 to 8.4

Havelock

Extent: 10 percent of the unit
Landform(s): flood plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

86--Canisteo clay loam, moderately fine substratum, 0 to 2 percent slopes

Canisteo

Extent: 85 percent of the unit
Landform(s): rims on depressions on moraines, flats on moraines
Slope gradient: 0 to 2 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 18 in	clay loam	moderate	3.26 to 3.98 in	7.4 to 8.4
Bkg1 -- 18 to 26 in	clay loam	moderate	1.18 to 1.50 in	7.4 to 8.4
Bkg2 -- 26 to 33 in	clay loam	moderate	0.85 to 1.28 in	7.4 to 8.4
Cg -- 33 to 60 in	loam	moderate	3.75 to 4.28 in	7.4 to 8.4

Glencoe

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

86--Canisteo clay loam, moderately fine substratum, 0 to 2 percent slopes

Seaforth

Extent: 5 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

96B--Collinwood silty clay loam, 3 to 6 percent slopes

Collinwood

Extent: 85 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 3 to 6 percent
Parent material: clayey lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	silty clay loam	moderately slow	1.10 to 1.34 in	5.6 to 7.3
Bw -- 8 to 32 in	silty clay	moderately slow	3.12 to 3.84 in	5.6 to 7.3
C -- 32 to 60 in	silty clay loam	moderately slow	3.07 to 4.19 in	7.4 to 8.4

Waldorf

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

96B--Collinwood silty clay loam, 3 to 6 percent slopes

Lura

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

101B--Truman silt loam, 2 to 6 percent slopes

Truman

Extent: 85 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 2 to 6 percent
Parent material: fine-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .37
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	silt loam	moderate	2.83 to 3.26 in	5.6 to 7.3
Bw -- 14 to 40 in	silt loam	moderate	4.68 to 5.46 in	5.6 to 7.8
Bk -- 40 to 60 in	silt loam	moderate	3.54 to 3.94 in	7.4 to 8.4

Madelia

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

101B--Truman silt loam, 2 to 6 percent slopes

Okoboji

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

102B--Clarion loam, moderately fine substratum, 2 to 5 percent slopes

Clarion

Extent: 85 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 5 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	loam	moderate	2.36 to 2.60 in	5.6 to 7.3
Bw -- 12 to 27 in	loam	moderate	2.61 to 2.92 in	5.6 to 7.8
Bk -- 27 to 60 in	loam	moderate	5.56 to 6.21 in	7.4 to 8.4

Webster

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

102B--Clarion loam, moderately fine substratum, 2 to 5 percent slopes

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

106C2--Lester loam, 6 to 12 percent slopes, eroded

Lester, eroded

Extent: 85 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 9 to 27 in	clay loam	moderate	2.72 to 3.44 in	5.1 to 7.3
Bk -- 27 to 60 in	loam	moderate	4.57 to 6.21 in	7.4 to 8.4

Cordova

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

106C2--Lester loam, 6 to 12 percent slopes, eroded

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

112--Harps clay loam, 0 to 2 percent slopes

Harps

Extent: 85 percent of the unit
Landform(s): rims on moraines
Slope gradient: 0 to 2 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,Ak -- 0 to 19 in	clay loam	moderate	3.59 to 3.97 in	7.9 to 8.4
Bkg1 -- 19 to 25 in	clay loam	moderate	1.07 to 1.20 in	7.9 to 8.4
Bkg2 -- 25 to 60 in	loam	moderate	4.85 to 6.58 in	7.4 to 8.4

Okoboji

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

112--Harps clay loam, 0 to 2 percent slopes

Seaforth

Extent: 5 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

113--Webster clay loam, 0 to 2 percent slopes

Webster

Extent: 85 percent of the unit
Landform(s): flats on moraines
Slope gradient: 0 to 2 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 17 in	clay loam	moderate	3.22 to 3.56 in	6.6 to 7.3
Bg -- 17 to 24 in	clay loam	moderate	1.13 to 1.28 in	6.6 to 7.8
Bkg -- 24 to 60 in	loam	moderate	5.02 to 6.81 in	7.4 to 8.4

Glencoe

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

113--Webster clay loam, 0 to 2 percent slopes

Nicollet

Extent: 5 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

114--Glencoe clay loam, depressional, 0 to 1 percent slopes

Glencoe, depressional

Extent: 90 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	clay loam	moderate	1.77 to 2.17 in	6.1 to 7.8
A -- 10 to 34 in	clay loam	moderate	4.32 to 5.28 in	6.1 to 7.8
Bg -- 34 to 60 in	clay loam	moderate	3.90 to 4.94 in	6.6 to 7.8

Klossner

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

114--Glencoe clay loam, depressional, 0 to 1 percent slopes

Canisteo

Extent: 5 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

129--Cylinder loam, 0 to 1 percent slopes

Cylinder

Extent: 85 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 1 percent
Parent material: fine-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 15 in	loam	moderate	2.99 to 3.29 in	5.6 to 7.3
Bw -- 15 to 31 in	loam	moderate	2.74 to 3.07 in	6.1 to 7.3
2Bk -- 31 to 60 in	gravelly sand	very rapid	0.57 to 1.15 in	6.6 to 8.4

Biscay

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

129--Cylinder loam, 0 to 1 percent slopes

Wadena

Extent: 5 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

130--Nicollet clay loam, 1 to 3 percent slopes

Nicollet

Extent: 85 percent of the unit
Landform(s): rises on moraines
Slope gradient: 1 to 3 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	clay loam	moderate	2.74 to 3.55 in	5.6 to 7.3
Bw -- 16 to 30 in	clay loam	moderate	2.07 to 2.62 in	5.6 to 7.8
2Bk -- 30 to 60 in	loam	moderate	4.19 to 5.69 in	7.4 to 8.4

Webster

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

130--Nicollet clay loam, 1 to 3 percent slopes

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

134--Okoboji silty clay loam, depressional, 0 to 1 percent slopes

Okoboji, depressional

Extent: 85 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	silty clay loam	moderately slow	1.65 to 1.81 in	6.1 to 7.8
A -- 8 to 28 in	silty clay loam	moderately slow	3.61 to 4.02 in	6.6 to 7.8
Bg -- 28 to 60 in	silty clay loam	moderately slow	5.74 to 6.38 in	6.6 to 8.4

Klossner

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

134--Okoboji silty clay loam, depressional, 0 to 1 percent slopes

Harps

Extent: 5 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Canisteo

Extent: 5 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

136--Madelia silty clay loam, 0 to 2 percent slopes

Madelia

Extent: 85 percent of the unit
Landform(s): flats on lake plains
Slope gradient: 0 to 2 percent
Parent material: fine-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	silty clay loam	moderate	2.91 to 3.87 in	6.1 to 7.3
Bg -- 16 to 30 in	silt loam	moderate	2.20 to 3.03 in	6.6 to 7.8
Bkg -- 30 to 60 in	silt loam	moderate	4.79 to 6.58 in	7.4 to 8.4

Okoboji

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

136--Madelia silty clay loam, 0 to 2 percent slopes

Spicer

Extent: 5 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

140--Spicer silty clay loam, 0 to 2 percent slopes

Spicer

Extent: 85 percent of the unit
Landform(s): flats on lake plains
Slope gradient: 0 to 2 percent
Parent material: fine-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	silty clay loam	moderate	2.55 to 3.40 in	7.4 to 8.4
Bkg1 -- 14 to 27 in	silty clay loam	moderate	2.08 to 2.86 in	7.4 to 8.4
Bkg2 -- 27 to 60 in	silt loam	moderate	5.23 to 7.19 in	7.4 to 8.4

Madelia

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

140--Spicer silty clay loam, 0 to 2 percent slopes

Okoboji

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

143B--Chelsea loamy fine sand, 1 to 6 percent slopes

Chelsea

Extent: 90 percent of the unit
Landform(s): outwash plains
Slope gradient: 1 to 6 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 6 in	loamy fine sand	rapid	0.59 to 0.89 in	5.6 to 7.3
E&Bt --	6 to 60 in	stratified loamy fine sand to fine sandy loam	rapid	3.24 to 4.31 in	5.1 to 6.5

Granby

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

178--Granby fine sandy loam, 0 to 1 percent slopes

Granby

Extent: 85 percent of the unit
Landform(s): flats on outwash plains
Slope gradient: 0 to 1 percent
Parent material: coarse-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 4w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	fine sandy loam	moderately rapid	2.08 to 2.34 in	5.6 to 7.3
Bg -- 13 to 26 in	fine sand	rapid	0.65 to 1.56 in	5.6 to 7.8
Cg -- 26 to 60 in	fine sand	rapid	1.69 to 3.05 in	6.6 to 8.4

Darfur

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

178--Granby fine sandy loam, 0 to 1 percent slopes

Dassel

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

181--Litchfield loamy fine sand, 0 to 2 percent slopes

Litchfield

Extent: 85 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 2 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .10
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 20 in	loamy fine sand	rapid	2.01 to 2.41 in	5.1 to 7.3
Bw -- 20 to 40 in	stratified fine sand to very fine sandy loam	moderately rapid	1.41 to 3.21 in	5.1 to 7.3
Cg -- 40 to 60 in	loamy fine sand	rapid	1.57 to 1.97 in	6.1 to 7.8

Darfur

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

181--Litchfield loamy fine sand, 0 to 2 percent slopes

Dassel

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

183--Dassel mucky fine sandy loam, depressional, 0 to 1 percent slopes

Dassel, depressional

Extent: 85 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 1 percent
Parent material: coarse-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 23 in	mucky fine sandy loam	moderately rapid	4.11 to 5.48 in	5.6 to 7.3
Bg -- 23 to 31 in	stratified loamy very fine sand to very fine sandy loam	moderately rapid	0.99 to 1.41 in	5.6 to 7.3
Cg -- 31 to 60 in	fine sand	rapid	2.30 to 2.87 in	6.1 to 7.8

Darfur

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

183--Dassel mucky fine sandy loam, depressional, 0 to 1 percent slopes

Litchfield

Extent: 5 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

197--Kingston silty clay loam, 1 to 3 percent slopes

Kingston

Extent: 90 percent of the unit
Landform(s): rises on lake plains
Slope gradient: 1 to 3 percent
Parent material: fine-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	silty clay loam	moderate	2.91 to 3.87 in	5.6 to 7.3
Bw -- 16 to 25 in	silty clay loam	moderate	1.45 to 1.81 in	5.6 to 7.8
C -- 25 to 60 in	silt loam	moderate	5.54 to 6.93 in	7.4 to 8.4

Okoboji

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

197--Kingston silty clay loam, 1 to 3 percent slopes

Madelia

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

211--Lura silty clay, depressional, 0 to 1 percent slopes

Lura, depressional

Extent: 90 percent of the unit
Landform(s): depressions
Slope gradient: 0 to 1 percent
Parent material: clayey lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 24 in	silty clay	slow	3.36 to 4.08 in	6.1 to 7.8
Bg -- 24 to 31 in	silty clay	slow	0.99 to 1.20 in	6.1 to 7.3
Bkg -- 31 to 60 in	silty clay	moderately slow	3.16 to 5.46 in	6.6 to 7.8

Cosmos

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

211--Lura silty clay, depressional, 0 to 1 percent slopes

Corvuso

Extent: 5 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

229--Waldorf silty clay loam, 0 to 2 percent slopes

Waldorf

Extent: 90 percent of the unit
Landform(s): flats on lake plains
Slope gradient: 0 to 2 percent
Parent material: clayey lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	silty clay loam	moderately slow	1.42 to 1.97 in	6.1 to 7.3
Bg -- 8 to 35 in	silty clay	moderately slow	3.53 to 4.35 in	6.6 to 7.8
Bkg -- 35 to 60 in	silty clay loam	moderately slow	4.96 to 5.46 in	7.4 to 8.4

Lura

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

229--Waldorf silty clay loam, 0 to 2 percent slopes

Collinwood

Extent: 5 percent of the unit
Landform(s): lake plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

239--Le Sueur clay loam, 1 to 3 percent slopes

Le Sueur

Extent: 85 percent of the unit
Landform(s): rises on moraines
Slope gradient: 1 to 3 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	clay loam	moderate	2.41 to 2.83 in	5.6 to 7.3
Bt -- 14 to 33 in	clay loam	moderate	2.83 to 3.59 in	5.1 to 7.3
Bk -- 33 to 60 in	loam	moderate	4.02 to 5.09 in	7.4 to 8.4

Cordova

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

239--Le Sueur clay loam, 1 to 3 percent slopes

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

281--Darfur loam, 0 to 2 percent slopes

Darfur

Extent: 85 percent of the unit
Landform(s): flats on outwash plains
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 23 in	loam	moderate	4.57 to 5.02 in	6.1 to 7.3
Bg -- 23 to 30 in	very fine sandy loam	moderately rapid	1.06 to 1.20 in	6.6 to 7.8
Cg -- 30 to 60 in	stratified very fine sand to loamy very fine sand	moderately rapid	2.39 to 2.99 in	6.6 to 8.4

Dassel

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

281--Darfur loam, 0 to 2 percent slopes

Litchfield

Extent: 5 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

286B--Shorewood silty clay loam, 3 to 6 percent slopes

Shorewood

Extent: 85 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 3 to 6 percent
Parent material: clayey lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	silty clay loam	moderately slow	2.13 to 2.60 in	5.6 to 7.3
Bt -- 12 to 38 in	silty clay	moderately slow	3.43 to 4.22 in	5.1 to 7.3
Bk -- 38 to 60 in	silty clay loam	moderate	3.03 to 3.46 in	6.6 to 7.8

Waldorf

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

286B--Shorewood silty clay loam, 3 to 6 percent slopes

Okoboji

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

311C2--Shorewood silty clay, 6 to 12 percent slopes, eroded

Shorewood, eroded

Extent: 85 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 6 to 12 percent
Parent material: clayey lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	silty clay	moderately slow	0.83 to 1.00 in	5.6 to 7.3
Bt -- 6 to 20 in	silty clay	moderately slow	1.84 to 2.27 in	5.1 to 7.3
Bk -- 20 to 60 in	silty clay loam	moderate	5.57 to 6.36 in	6.6 to 7.8

Waldorf

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

311C2--Shorewood silty clay, 6 to 12 percent slopes, eroded

Bold

Extent: 5 percent of the unit
Landform(s): lake plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

327A--Dickman sandy loam, 0 to 2 percent slopes

Dickman

Extent: 90 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 2 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	5.6 to 6.5
Bw -- 12 to 18 in	sandy loam	moderately rapid	0.76 to 0.88 in	5.6 to 7.3
2C -- 18 to 60 in	sand	rapid	0.83 to 2.92 in	5.6 to 7.8

Darfur

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

327A--Dickman sandy loam, 0 to 2 percent slopes

Litchfield

Extent: 5 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

327B--Dickman sandy loam, 2 to 6 percent slopes

Dickman

Extent: 85 percent of the unit
Landform(s): outwash plains
Slope gradient: 2 to 6 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	5.6 to 6.5
Bw -- 12 to 30 in	sandy loam	moderately rapid	2.17 to 2.54 in	5.6 to 7.3
2C -- 30 to 60 in	sand	rapid	0.60 to 2.09 in	5.6 to 7.8

Litchfield

Extent: 10 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

327B--Dickman sandy loam, 2 to 6 percent slopes

Darfur

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

399--Biscay loam, depressional, 0 to 1 percent slopes

Biscay, depressional

Extent: 85 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 1 percent
Parent material: fine-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	loam	moderate	2.83 to 3.12 in	6.1 to 7.8
Bg -- 14 to 25 in	loam	moderate	1.87 to 2.09 in	6.6 to 7.8
2Cg -- 25 to 60 in	stratified gravelly coarse sand to loamy sand	very rapid	0.69 to 1.39 in	7.4 to 8.4

Mayer

Extent: 10 percent of the unit
Landform(s): flats
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

399--Biscay loam, depressional, 0 to 1 percent slopes

Klossner

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

415--Kanaranzi loam, 0 to 3 percent slopes

Kanaranzi

Extent: 85 percent of the unit
Landform(s): flats on outwash plains, rises on outwash plains
Slope gradient: 0 to 3 percent
Parent material: coarse-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.54 to 1.90 in	5.6 to 7.3
Bw -- 9 to 18 in	loam	moderate	1.36 to 1.72 in	5.6 to 7.8
2C -- 18 to 60 in	gravelly coarse sand	very rapid	0.83 to 1.67 in	7.4 to 8.4

Biscay

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

415--Kanaranzi loam, 0 to 3 percent slopes

Cylinder

Extent: 5 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

423--Seaforth loam, 1 to 3 percent slopes

Seaforth

Extent: 85 percent of the unit
Landform(s): rises on moraines
Slope gradient: 1 to 3 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	loam	moderate	2.01 to 2.83 in	7.4 to 8.4
Bk -- 12 to 28 in	loam	moderate	2.42 to 3.07 in	7.4 to 8.4
C -- 28 to 60 in	loam	moderate	5.42 to 6.06 in	7.4 to 8.4

Canisteo

Extent: 10 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

423--Seaforth loam, 1 to 3 percent slopes

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

511--Marcellon loam, 0 to 3 percent slopes

Marcellon

Extent: 85 percent of the unit
Landform(s): rises on moraines
Slope gradient: 0 to 3 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	loam	moderate	2.21 to 3.12 in	5.6 to 7.3
Bt -- 13 to 32 in	loam	moderate	2.27 to 3.40 in	5.6 to 7.3
Bk,C -- 32 to 60 in	sandy loam	moderately rapid	1.96 to 3.91 in	7.4 to 8.4

Uniongrove

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

511--Marcellon loam, 0 to 3 percent slopes

Lundlake

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

523--Houghton muck, depressional, 0 to 1 percent slopes

Houghton, depressional

Extent: 90 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa1 -- 0 to 7 in	muck	moderately rapid	2.48 to 3.19 in	
Oa2 -- 7 to 60 in	muck	moderately rapid	18.46 to 23.74 in	

Klossner

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

525--Muskego muck, depressional, 0 to 1 percent slopes

Muskego, depressional

Extent: 90 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over coprogenic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oap -- 0 to 10 in	muck	moderately rapid	3.44 to 4.43 in	
Oa -- 10 to 40 in	muck	moderately rapid	10.61 to 13.64 in	
Lco -- 40 to 60 in	mucky silt loam	slow	3.54 to 4.72 in	

Blue Earth

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

539--Klossner muck, depressional, 0 to 1 percent slopes

Klossner, depressional

Extent: 90 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 28 in	muck	moderately rapid	9.78 to 13.42 in	
2A -- 28 to 45 in	silt loam	moderate	3.72 to 4.40 in	
2Cg -- 45 to 60 in	loam	moderate	2.24 to 2.84 in	

Okoboji

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

548--Medo muck, depressional, 0 to 1 percent slopes

Medo, depressional

Extent: 90 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oap,Oa -- 0 to 24 in	muck	moderately rapid	8.41 to 10.81 in	
2A -- 24 to 29 in	silt loam	moderately rapid	0.67 to 1.02 in	
2Bg -- 29 to 56 in	sandy loam	moderately rapid	3.48 to 5.35 in	
3Cg -- 56 to 60 in	sand	rapid	0.12 to 0.39 in	

Dassel

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

610--Calco silty clay loam, 0 to 1 percent slopes, frequently flooded

Calco, frequently flooded

Extent: 90 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 1 percent
Parent material: fine-silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 5w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silty clay loam	moderate	1.24 to 1.36 in	7.4 to 8.4
A2 -- 6 to 55 in	silty clay loam	moderate	10.33 to 11.32 in	7.4 to 8.4
Cg -- 55 to 60 in	silty clay loam	moderate	0.85 to 0.94 in	7.4 to 8.4

Havelock

Extent: 10 percent of the unit
Landform(s): flood plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

611D--Hawick gravelly sandy loam, 12 to 25 percent slopes

Hawick

Extent: 85 percent of the unit
Landform(s): outwash plains
Slope gradient: 12 to 25 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .17
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	gravelly sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw -- 7 to 10 in	gravelly loamy coarse sand	rapid	0.08 to 0.28 in	6.1 to 7.8
2Bk -- 10 to 60 in	gravelly coarse sand	very rapid	1.00 to 3.00 in	7.4 to 8.4

Minneopa

Extent: 10 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

611D--Hawick gravelly sandy loam, 12 to 25 percent slopes

Biscay

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

612B--Wadenill loam, 2 to 6 percent slopes

Wadenill

Extent: 85 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	loam	moderate	2.60 to 2.86 in	5.6 to 7.3
Bw -- 13 to 30 in	loam	moderately rapid	2.03 to 3.22 in	5.6 to 7.3
C -- 30 to 60 in	sandy loam	moderately rapid	3.29 to 5.69 in	7.4 to 8.4

Uniongrove

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

612B--Wadenill loam, 2 to 6 percent slopes

Lundlake

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

613--Grovecity loam, 1 to 3 percent slopes

Grovecity

Extent: 85 percent of the unit
Landform(s): rises on moraines
Slope gradient: 1 to 3 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 15 in	loam	moderately rapid	2.99 to 3.29 in	6.1 to 7.3
Bw -- 15 to 30 in	sandy loam	moderately rapid	1.80 to 2.84 in	6.1 to 7.8
C -- 30 to 60 in	fine sandy loam	moderately rapid	3.29 to 5.69 in	7.4 to 8.4

Uniongrove

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

613--Grovecity loam, 1 to 3 percent slopes

Lundlake

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

664--Zook silty clay loam, 0 to 2 percent slopes, occasionally flooded

Zook, occasionally flooded

Extent: 90 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: fine-silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: occasional
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	silty clay loam	moderately slow	2.07 to 2.26 in	5.6 to 7.3
A -- 10 to 41 in	silty clay	slow	3.42 to 4.04 in	5.6 to 7.8
Bg -- 41 to 60 in	silty clay loam	moderately slow	2.08 to 4.16 in	5.6 to 7.8

Calco

Extent: 10 percent of the unit
Landform(s): flood plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

740--Hamel-Glencoe, depressional complex, 0 to 3 percent slopes

Hamel

Extent: 70 percent of the unit
Landform(s): drainageways on moraines
Slope gradient: 0 to 3 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 28 in	loam	moderate	5.59 to 6.71 in	5.6 to 7.3
Btg -- 28 to 56 in	clay loam	moderately slow	4.47 to 5.31 in	5.6 to 7.3
Bkg -- 56 to 60 in	loam	moderate	0.55 to 0.71 in	7.4 to 7.8

Glencoe, depressional

Extent: 20 percent of the unit
Landform(s): depressions, moraines
Slope gradient: 0 to 2 percent
Parent material: fine-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1 -- 0 to 15 in	loam	moderate	2.69 to 3.29 in	6.1 to 7.8
A2 -- 15 to 45 in	silty clay loam	moderate	5.39 to 6.58 in	6.1 to 7.8
Bg -- 45 to 60 in	clay loam	moderate	2.24 to 2.84 in	6.6 to 7.8

740--Hamel-Glencoe, depressional complex, 0 to 3 percent slopes

Le Sueur

Extent: 10 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

804B--Koronis-Sunburg-Hawick complex, 2 to 6 percent slopes

Koronis

Extent: 50 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderately rapid	1.57 to 1.73 in	5.6 to 7.3
Bt -- 8 to 33 in	loam	moderately rapid	3.78 to 4.79 in	5.6 to 7.3
Bk -- 33 to 60 in	sandy loam	moderately rapid	2.94 to 4.28 in	7.4 to 8.4

Sunburg

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	sandy loam	moderately rapid	1.45 to 1.63 in	6.6 to 8.4
Bk -- 9 to 60 in	sandy loam	moderately rapid	5.59 to 9.65 in	7.4 to 8.4

804B--Koronis-Sunburg-Hawick complex, 2 to 6 percent slopes

Hawick

Extent: 15 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .05
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	gravelly loamy coarse sand	rapid	0.27 to 1.18 in	6.1 to 7.8
Bw -- 9 to 49 in	gravelly coarse sand	rapid	1.19 to 3.98 in	6.1 to 7.8
2Bk -- 49 to 60 in	gravelly coarse sand	very rapid	0.22 to 0.66 in	7.4 to 8.4

Uniongrove

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

804B--Koronis-Sunburg-Hawick complex, 2 to 6 percent slopes

Lundlake

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

804C2--Koronis-Sunburg-Hawick complex, 6 to 12 percent slopes, eroded

Koronis, eroded

Extent: 45 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bt -- 8 to 26 in	sandy loam	moderately rapid	2.72 to 3.44 in	5.6 to 7.3
Bk -- 26 to 60 in	sandy loam	moderately rapid	3.72 to 5.42 in	7.4 to 8.4

Sunburg, eroded

Extent: 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.57 to 1.77 in	6.6 to 8.4
Bk -- 10 to 60 in	sandy loam	moderately rapid	5.50 to 9.50 in	7.4 to 8.4

804C2--Koronis-Sunburg-Hawick complex, 6 to 12 percent slopes, eroded

Hawick, eroded

Extent: 15 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 1
Wind erodibility index (WEI): 160
Kw factor (surface layer) .02
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 9 in	gravelly coarse sand	rapid	0.27 to 1.18 in	6.1 to 7.8
2Bk --	9 to 60 in	gravelly loamy coarse sand	rapid	1.52 to 5.08 in	6.1 to 7.8

Forestcity

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

804C2--Koronis-Sunburg-Hawick complex, 6 to 12 percent slopes, eroded

Lundlake

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

804D2--Koronis-Sunburg-Hawick complex, 12 to 18 percent slopes, eroded

Koronis, eroded

Extent: 40 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bt -- 8 to 25 in	sandy loam	moderately rapid	2.60 to 3.29 in	5.6 to 7.3
Bk -- 25 to 60 in	sandy loam	moderately rapid	3.81 to 5.54 in	7.4 to 8.4

Sunburg, eroded

Extent: 35 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	sandy loam	moderately rapid	1.13 to 1.28 in	6.6 to 8.4
Bk -- 7 to 60 in	sandy loam	moderately rapid	5.80 to 10.02 in	7.4 to 8.4

804D2--Koronis-Sunburg-Hawick complex, 12 to 18 percent slopes, eroded

Hawick, eroded

Extent: 15 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .15
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	gravelly coarse sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw -- 7 to 20 in	gravelly loamy coarse sand	rapid	0.39 to 1.30 in	6.1 to 7.8
2Bk -- 20 to 60 in	gravelly coarse sand	very rapid	0.80 to 2.39 in	7.4 to 8.4

Forestcity

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

804E--Koronis-Sunburg-Hawick complex, 18 to 40 percent slopes

Koronis

Extent: 50 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 5 in	fine sandy loam	moderately rapid	0.67 to 0.92 in	5.6 to 7.3
Bt -- 5 to 21 in	fine sandy loam	moderately rapid	2.36 to 2.99 in	5.6 to 7.3
Bk -- 21 to 60 in	fine sandy loam	moderately rapid	4.29 to 6.24 in	7.4 to 8.4

Sunburg

Extent: 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 4 in	loam	moderately rapid	0.63 to 0.71 in	6.6 to 8.4
Bk -- 4 to 60 in	fine sandy loam	moderately rapid	6.15 to 10.62 in	7.4 to 8.4

804E--Koronis-Sunburg-Hawick complex, 18 to 40 percent slopes

Hawick

Extent: 15 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .05
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 14 in	gravelly loamy coarse sand	rapid	0.43 to 1.84 in	6.1 to 7.8
2Bk -- 14 to 60 in	gravelly coarse sand	rapid	1.37 to 4.57 in	6.1 to 7.8

Forestcity

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

805C2--Sunburg-Wadenill complex, 6 to 12 percent slopes, eroded

Sunburg, eroded

Extent: 50 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.26 to 1.42 in	6.6 to 8.4
Bk -- 8 to 60 in	sandy loam	moderately rapid	5.72 to 9.87 in	7.4 to 8.4

Wadenill, eroded

Extent: 40 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
Bw -- 7 to 20 in	loam	moderately rapid	1.56 to 2.47 in	5.6 to 7.3
Bk -- 20 to 60 in	sandy loam	moderately rapid	4.37 to 7.56 in	7.4 to 8.4

805C2--Sunburg-Wadenill complex, 6 to 12 percent slopes, eroded

Lundlake

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Forestcity

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

805D2--Sunburg-Wadenill complex, 12 to 18 percent slopes, eroded

Sunburg, eroded

Extent: 65 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	sandy loam	moderately rapid	1.13 to 1.28 in	6.6 to 8.4
Bk -- 7 to 60 in	sandy loam	moderately rapid	5.80 to 10.02 in	7.4 to 8.4

Wadenill, eroded

Extent: 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
Bw -- 7 to 18 in	loam	moderately rapid	1.32 to 2.09 in	5.6 to 7.3
Bk -- 18 to 60 in	sandy loam	moderately rapid	4.59 to 7.93 in	7.4 to 8.4

805D2--Sunburg-Wadenill complex, 12 to 18 percent slopes, eroded

Forestcity

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

875B--Estherville-Hawick complex, 2 to 6 percent slopes

Estherville

Extent: 60 percent of the unit
Landform(s): outwash plains
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy outwash over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.63 in	5.6 to 7.3
Bw -- 9 to 14 in	sandy loam	moderately rapid	0.67 to 0.92 in	5.6 to 7.3
2Bk -- 14 to 60 in	gravelly coarse sand	very rapid	0.91 to 1.83 in	6.6 to 8.4

Hawick

Extent: 30 percent of the unit
Landform(s): outwash plains
Slope gradient: 2 to 6 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	sandy loam	moderately rapid	0.92 to 1.06 in	6.1 to 7.8
Bw -- 7 to 11 in	gravelly loamy coarse sand	rapid	0.12 to 0.39 in	6.1 to 7.8
2Bk -- 11 to 60 in	gravelly coarse sand	very rapid	0.98 to 2.93 in	7.4 to 8.4

875B--Estherville-Hawick complex, 2 to 6 percent slopes

Biscay

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

875C--Hawick-Estherville complex, 6 to 12 percent slopes

Hawick

Extent: 60 percent of the unit
Landform(s): hills on outwash plains
Slope gradient: 6 to 12 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	gravelly sandy loam	rapid	0.33 to 1.43 in	6.1 to 7.8
2Bk -- 11 to 60 in	gravelly coarse sand	very rapid	0.98 to 2.93 in	7.4 to 8.4

Estherville

Extent: 25 percent of the unit
Landform(s): hills on outwash plains
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy outwash over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bw -- 8 to 13 in	sandy loam	moderately rapid	0.67 to 0.92 in	5.6 to 7.3
2Bk -- 13 to 60 in	gravelly coarse sand	very rapid	0.94 to 1.87 in	6.6 to 8.4

875C--Hawick-Estherville complex, 6 to 12 percent slopes

Biscay

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Minneopa

Extent: 5 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

887B--Clarion-Swanlake complex, 2 to 6 percent slopes

Clarion

Extent: 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 5 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	loam	moderate	2.20 to 2.43 in	5.6 to 7.3
Bw -- 11 to 30 in	clay loam	moderate	3.21 to 3.59 in	5.6 to 7.8
Bk -- 30 to 60 in	loam	moderate	5.09 to 5.69 in	7.4 to 8.4

Swanlake

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.89 in	7.4 to 8.4
Bk -- 8 to 12 in	loam	moderate	0.67 to 0.75 in	7.4 to 8.4
C -- 12 to 60 in	loam	moderate	8.17 to 9.13 in	7.4 to 8.4

887B--Clarion-Swanlake complex, 2 to 6 percent slopes

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Webster

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

899--Harps-Okoboji, depressional complex, 0 to 2 percent slopes

Harps

Extent: 60 percent of the unit
Landform(s): rims on moraines
Slope gradient: 0 to 2 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Apk -- 0 to 9 in	clay loam	moderate	1.72 to 1.90 in	7.9 to 8.4
ABk -- 9 to 28 in	loam	moderate	3.21 to 3.59 in	7.9 to 8.4
Bk -- 28 to 60 in	loam	moderate	4.46 to 6.06 in	7.4 to 8.4

Okoboji, depressional

Extent: 30 percent of the unit
Landform(s): depressions, moraines
Slope gradient: 0 to 1 percent
Parent material: fine-silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 17 in	silty clay loam	moderately slow	3.56 to 3.89 in	6.1 to 7.8
Bg -- 17 to 47 in	silty clay loam	moderately slow	5.39 to 5.98 in	6.6 to 7.8
Bk -- 47 to 60 in	silty clay loam	moderately slow	2.34 to 2.60 in	6.6 to 8.4

899--Harps-Okoboji, depressional complex, 0 to 2 percent slopes

Seaforth

Extent: 10 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

909C2--Bold-Truman complex, 6 to 12 percent slopes, eroded

Bold, eroded

Extent: 55 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 6 to 12 percent
Parent material: coarse-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .49
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silt loam	moderate	1.49 to 1.70 in	7.4 to 8.4
Bk -- 7 to 60 in	silt loam	moderate	10.55 to 12.66 in	7.4 to 8.4

Truman, eroded

Extent: 35 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 6 to 12 percent
Parent material: fine-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	silt loam	moderate	1.97 to 2.26 in	5.6 to 7.3
Bw -- 10 to 31 in	silt loam	moderate	3.83 to 4.46 in	5.6 to 7.8
Bk -- 31 to 60 in	silt loam	moderate	5.17 to 5.75 in	7.4 to 8.4

909C2--Bold-Truman complex, 6 to 12 percent slopes, eroded

Okoboji

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Madelia

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

909D2--Bold-Truman complex, 12 to 18 percent slopes, eroded

Bold, eroded

Extent: 65 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 12 to 18 percent
Parent material: coarse-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .49
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silt loam	moderate	1.49 to 1.70 in	7.4 to 8.4
Bk -- 7 to 60 in	silt loam	moderate	10.55 to 12.66 in	7.4 to 8.4

Truman, eroded

Extent: 25 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 12 to 18 percent
Parent material: fine-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 13 in	silt loam	moderate	2.60 to 2.99 in	5.6 to 7.3
Bw -- 13 to 22 in	silt loam	moderate	1.63 to 1.90 in	5.6 to 7.8
Bk -- 22 to 60 in	silt loam	moderate	6.80 to 7.56 in	7.4 to 8.4

909D2--Bold-Truman complex, 12 to 18 percent slopes, eroded

Madelia

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

920B--Clarion-Storden-Hawick complex, 2 to 6 percent slopes

Clarion

Extent: 50 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 5 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	loam	moderate	2.36 to 2.60 in	5.6 to 7.3
Bw -- 12 to 23 in	loam	moderate	1.87 to 2.09 in	5.6 to 7.8
Bk -- 23 to 60 in	sandy loam	moderate	6.29 to 7.03 in	7.4 to 8.4

Storden

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
Bk -- 7 to 37 in	loam	moderate	4.49 to 5.69 in	7.4 to 8.4
C -- 37 to 60 in	loam	moderate	3.43 to 4.34 in	7.4 to 8.4

920B--Clarion-Storden-Hawick complex, 2 to 6 percent slopes

Hawick

Extent: 15 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	gravelly sandy loam	rapid	0.27 to 1.18 in	6.1 to 7.8
Bw -- 9 to 28 in	gravelly coarse sand	rapid	0.57 to 1.89 in	6.1 to 7.8
2Bk -- 28 to 60 in	gravelly coarse sand	very rapid	0.64 to 1.91 in	7.4 to 8.4

Webster

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

920B--Clarion-Storden-Hawick complex, 2 to 6 percent slopes

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

945D2--Lester-Storden complex, 12 to 18 percent slopes, eroded

Lester, eroded

Extent: 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 9 to 26 in	clay loam	moderate	2.54 to 3.22 in	5.1 to 7.3
Bk -- 26 to 60 in	loam	moderate	4.74 to 6.43 in	7.4 to 8.4

Storden, eroded

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 5 in	loam	moderate	1.02 to 1.13 in	7.4 to 8.4
Bk -- 5 to 28 in	loam	moderate	3.43 to 4.34 in	7.4 to 8.4
C -- 28 to 60 in	loam	moderate	4.78 to 6.06 in	7.4 to 8.4

945D2--Lester-Storden complex, 12 to 18 percent slopes, eroded

Hamel

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

945E--Lester-Storden complex, 18 to 40 percent slopes

Lester

Extent: 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
Bt -- 7 to 23 in	clay loam	moderate	2.36 to 2.99 in	5.1 to 7.3
Bk -- 23 to 60 in	loam	moderate	5.18 to 7.03 in	7.4 to 8.4

Storden

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	7.4 to 8.4
Bk -- 9 to 30 in	loam	moderate	3.13 to 3.96 in	7.4 to 8.4
C -- 30 to 60 in	loam	moderate	4.49 to 5.69 in	7.4 to 8.4

945E--Lester-Storden complex, 18 to 40 percent slopes

Hamel

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

956--Canisteo-Glencoe, depressional complex, 0 to 2 percent slopes

Canisteo

Extent: 65 percent of the unit
Landform(s): rims on depressions on moraines, flats on moraines
Slope gradient: 0 to 2 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 17 in	clay loam	moderate	3.05 to 3.72 in	7.4 to 8.4
AB -- 17 to 23 in	clay loam	moderate	0.89 to 1.12 in	7.4 to 8.4
Bkg -- 23 to 41 in	clay loam	moderate	2.17 to 3.26 in	7.4 to 8.4
Cg -- 41 to 60 in	loam	moderate	2.65 to 3.02 in	7.4 to 8.4

Glencoe, depressional

Extent: 25 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	clay loam	moderate	1.28 to 1.56 in	6.1 to 7.8
A -- 7 to 36 in	clay loam	moderate	5.17 to 6.32 in	6.1 to 7.8
Bg -- 36 to 60 in	loam	moderate	3.60 to 4.56 in	6.6 to 7.8

956--Canisteo-Glencoe, depressional complex, 0 to 2 percent slopes

Seaforth

Extent: 10 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

960C2--Storden-Omsrud complex, 6 to 12 percent slopes, eroded

Storden, eroded

Extent: 65 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk -- 8 to 21 in	loam	moderate	1.95 to 2.47 in	7.4 to 8.4
C -- 21 to 60 in	loam	moderate	5.85 to 7.41 in	7.4 to 8.4

Omsrud, eroded

Extent: 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bw -- 9 to 25 in	loam	moderate	2.74 to 3.07 in	5.6 to 7.8
Bk -- 25 to 60 in	loam	moderate	5.89 to 6.58 in	7.4 to 8.4

960C2--Storden-Omsrud complex, 6 to 12 percent slopes, eroded

Hamel

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

960D2--Storden-Omsrud complex, 12 to 18 percent slopes, eroded

Storden, eroded

Extent: 65 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
Bk -- 7 to 23 in	loam	moderate	2.36 to 2.99 in	7.4 to 8.4
C -- 23 to 60 in	loam	moderate	5.55 to 7.03 in	7.4 to 8.4

Omsrud, eroded

Extent: 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	5.6 to 7.3
Bw -- 8 to 22 in	loam	moderate	2.41 to 2.69 in	5.6 to 7.8
Bk -- 22 to 60 in	loam	moderate	6.43 to 7.18 in	7.4 to 8.4

960D2--Storden-Omsrud complex, 12 to 18 percent slopes, eroded

Hamel

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

978--Cordova-Rolfe, depressional complex, 0 to 2 percent slopes

Cordova

Extent: 60 percent of the unit
Landform(s): swales on moraines
Slope gradient: 0 to 2 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 15 in	clay loam	moderately slow	2.69 to 3.29 in	6.1 to 7.3
Btg -- 15 to 39 in	clay loam	moderately slow	3.60 to 4.56 in	5.1 to 6.5
Bkg -- 39 to 60 in	loam	moderate	2.92 to 3.34 in	7.4 to 8.4

Rolfe, depressional

Extent: 30 percent of the unit
Landform(s): depressions
Slope gradient: 0 to 1 percent
Parent material: clayey alluvium over fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,AE -- 0 to 28 in	silt loam	moderate	6.15 to 6.71 in	5.1 to 7.3
E -- 28 to 40 in	silty clay	slow	1.34 to 1.59 in	6.1 to 7.3
Btg -- 40 to 60 in	clay loam	moderate	2.76 to 3.15 in	6.1 to 8.4

978--Cordova-Rolfe, depressional complex, 0 to 2 percent slopes

Glencoe

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1015--Udipsamments (cut and fill land)

Udipsamments

Extent: 85 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 6 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 1
Wind erodibility index (WEI): 220
Kw factor (surface layer) .02
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Bk -- 0 to 14 in	sand	rapid	0.71 to 1.42 in	6.6 to 7.3
C1 -- 14 to 60 in	sand	rapid	2.28 to 3.65 in	6.6 to 7.3
C2 -- 60 to 80 in	coarse sand	very rapid	0.60 to 1.00 in	7.4 to 8.4

1016--Udorthents, Loamy (cut, and fill land)

Udorthents, loamy

Extent: 85 percent of the unit
Landform(s): moraines
Slope gradient: 0 to 20 percent
Parent material: loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Bk -- 0 to 60 in	loam	moderately rapid	4.79 to 8.38 in	6.6 to 9.0
C -- 60 to 80 in	loam	moderately rapid	1.61 to 2.81 in	6.6 to 9.0

1030--Pits, gravel-Udipsamments complex

Pits, gravel

Extent: 50 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 30 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: unranked
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

Udipsamments

Extent: 50 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 30 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 1
Wind erodibility index (WEI): 220
Kw factor (surface layer) .05
Land capability, nonirrigated: 8s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Bk --	0 to 14 in	sand	rapid	0.71 to 1.42 in	6.6 to 7.3
C1 --	14 to 60 in	sand	rapid	2.28 to 3.65 in	6.6 to 7.3
C2 --	60 to 80 in	coarse sand	very rapid	0.60 to 1.00 in	7.4 to 8.4

1080--Klossner, Okoboji, and Glencoe soils, ponded, 0 to 1 percent slopes

Klossner, ponded

Extent: 30 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 25 in	muck	moderately rapid	8.82 to 11.34 in	
2A -- 25 to 60 in	silty clay loam	moderate	4.85 to 7.62 in	

Okoboji, ponded

Extent: 30 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .28
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A1 -- 0 to 10 in	mucky silty clay loam	moderate	2.17 to 2.46 in	6.6 to 7.8
A2 -- 10 to 42 in	silty clay loam	moderately slow	5.81 to 6.46 in	6.6 to 7.8
Bg -- 42 to 60 in	silty clay loam	moderately slow	3.19 to 3.54 in	6.6 to 7.8

1080--Klossner, Okoboji, and Glencoe soils, ponded, 0 to 1 percent slopes

Glencoe, ponded

Extent: 30 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .28
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 42 in	silty clay loam	moderate	7.58 to 9.27 in	6.1 to 7.8
Bg -- 42 to 50 in	clay loam	moderate	1.18 to 1.50 in	6.6 to 7.8
Bkg -- 50 to 60 in	clay loam	moderate	1.48 to 1.87 in	7.4 to 7.8

Canisteo

Extent: 10 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1096--Fieldon-Dassel, depressional complex, 0 to 2 percent slopes

Fieldon

Extent: 70 percent of the unit
Landform(s): flats on outwash plains
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 20 in	loam	moderately rapid	3.61 to 4.02 in	7.4 to 8.4
Bg -- 20 to 26 in	fine sandy loam	moderately rapid	0.89 to 1.00 in	7.4 to 8.4
Cg -- 26 to 60 in	stratified fine sand to fine sandy loam	rapid	1.69 to 2.37 in	7.4 to 8.4

Dassel, depressional

Extent: 20 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 1 percent
Parent material: coarse-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 21 in	loam	moderately rapid	3.76 to 5.01 in	5.6 to 7.3
Bg -- 21 to 32 in	stratified loamy fine sand to fine sandy loam	moderately rapid	1.32 to 1.87 in	5.6 to 7.3
Cg -- 32 to 60 in	stratified fine sand to loamy very fine sand to fine sandy loam	rapid	2.24 to 2.80 in	6.1 to 7.8

1096--Fieldon-Dassel, depressional complex, 0 to 2 percent slopes

Litchfield

Extent: 10 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

1097--Mayer-Biscay, depressional complex, 0 to 2 percent slopes

Mayer

Extent: 70 percent of the unit
Landform(s): flats on outwash plains
Slope gradient: 0 to 2 percent
Parent material: fine-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	loam	moderate	3.23 to 3.55 in	7.4 to 8.4
Bkg -- 16 to 25 in	gravelly loam	moderate	1.45 to 1.72 in	7.4 to 8.4
2Bkg -- 25 to 60 in	gravelly sand	rapid	0.69 to 1.39 in	7.4 to 8.4

Biscay, depressional

Extent: 20 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 2 percent
Parent material: fine-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 20 in	clay loam	moderate	4.02 to 4.42 in	6.1 to 7.8
Bg -- 20 to 25 in	clay loam	moderate	0.87 to 0.97 in	6.6 to 7.8
2Bg -- 25 to 28 in	coarse sandy loam	moderately rapid	0.30 to 0.47 in	6.6 to 7.8
2Bkg -- 28 to 60 in	gravelly loamy sand	very rapid	0.64 to 1.28 in	7.4 to 8.4

1098--Biscay-Biscay, depressional complex, 0 to 2 percent slopes

Extent: percent of the unit
Landform(s):
Slope gradient:
Parent material:
Restrictive feature(s):
Flooding:
Ponding:
Drainage class:
Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil:
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1099--Granby loamy fine sand, very wet, 0 to 1 percent slopes

Granby, very wet

Extent: 85 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 1 percent
Parent material: coarse-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .15
Land capability, nonirrigated: 5w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	loamy fine sand	rapid	1.18 to 1.42 in	5.6 to 7.3
Bg -- 12 to 24 in	fine sand	rapid	0.61 to 1.46 in	5.6 to 7.8
Cg -- 24 to 60 in	loamy fine sand	rapid	1.79 to 3.22 in	6.6 to 8.4

Darfur

Extent: 5 percent of the unit
Landform(s): flats
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1099--Granby loamy fine sand, very wet, 0 to 1 percent slopes

Klossner

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Fieldon

Extent: 5 percent of the unit
Landform(s): flats
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1100--Nicollet silty clay loam, 1 to 3 percent slopes

Nicollet

Extent: 85 percent of the unit
Landform(s): rises on moraines
Slope gradient: 1 to 3 percent
Parent material: fine-silty lacustrine deposits over fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	silty clay loam	moderate	2.21 to 2.86 in	5.6 to 7.3
Bw -- 13 to 26 in	clay loam	moderate	1.95 to 2.47 in	5.6 to 7.8
Bk -- 26 to 60 in	clay loam	moderate	4.74 to 6.43 in	7.4 to 8.4

Webster

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1100--Nicollet silty clay loam, 1 to 3 percent slopes

Okoboji

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1101--Webster silty clay loam, moderately fine substratum, 0 to 2 percent slopes

Webster

Extent: 85 percent of the unit
Landform(s): flats on moraines
Slope gradient: 0 to 2 percent
Parent material: fine-silty lacustrine deposits over fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	silty clay loam	moderate	3.59 to 3.97 in	6.6 to 7.3
Bg -- 19 to 24 in	clay loam	moderate	0.82 to 0.92 in	6.6 to 7.8
Bkg -- 24 to 60 in	loam	moderate	5.02 to 6.81 in	7.4 to 8.4

Okoboji

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1101--Webster silty clay loam, moderately fine substratum, 0 to 2 percent slopes

Nicollet

Extent: 5 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1159B--Strout-Arkton complex, 2 to 6 percent slopes

Strout

Extent: 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,AB -- 0 to 10 in	clay	moderately slow	1.38 to 1.87 in	6.1 to 7.3
Bw -- 10 to 24 in	clay loam	moderately slow	1.70 to 2.55 in	5.6 to 7.3
Bk -- 24 to 80 in	clay loam	moderately slow	5.59 to 8.39 in	7.4 to 8.4

Arkton

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.36 to 1.72 in	6.6 to 8.4
Bk1 -- 9 to 25 in	clay	moderately slow	1.61 to 3.07 in	7.4 to 8.4
Bk2 -- 25 to 80 in	clay loam	moderately slow	5.47 to 8.21 in	7.4 to 8.4

1159B--Strout-Arkton complex, 2 to 6 percent slopes

Lura

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Cosmos

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1162A--Kandiyohi clay, 0 to 2 percent slopes

Kandiyohi

Extent: 80 percent of the unit
Landform(s): flats on moraines, rises on moraines
Slope gradient: 0 to 2 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	clay	moderately slow	1.57 to 2.17 in	6.1 to 7.3
Bw -- 10 to 23 in	clay	moderately slow	1.82 to 2.47 in	6.1 to 7.3
Bkg -- 23 to 29 in	clay	moderately slow	0.82 to 1.20 in	7.4 to 8.4
2Bkg -- 29 to 80 in	clay loam	moderately slow	5.08 to 7.62 in	7.4 to 8.4

Lura

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1162A--Kandiyohi clay, 0 to 2 percent slopes

Cosmos

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1162B--Kandiyohi clay, 2 to 5 percent slopes

Kandiyohi

Extent: 80 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 5 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	clay	moderately slow	1.57 to 2.17 in	6.1 to 7.3
Bw -- 10 to 23 in	clay	moderately slow	1.82 to 2.47 in	6.1 to 7.3
Bkg -- 23 to 29 in	clay	moderately slow	0.82 to 1.20 in	7.4 to 8.4
2Bkg -- 29 to 80 in	clay loam	moderately slow	5.08 to 7.62 in	7.4 to 8.4

Lura

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1162B--Kandiyohi clay, 2 to 5 percent slopes

Cosmos

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1163--Cohoctah loam, 0 to 2 percent slopes, frequently flooded

Cohoctah, frequently flooded

Extent: 90 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
Land capability, nonirrigated: 5w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 17 in	loam	moderately rapid	3.05 to 4.06 in	6.1 to 7.8
Cg1 -- 17 to 22 in	loam	moderately rapid	0.61 to 1.02 in	6.1 to 8.4
Cg2 -- 22 to 60 in	stratified sand to loamy fine sand to fine sandy loam	very rapid	2.27 to 3.40 in	6.1 to 8.4

Havelock

Extent: 10 percent of the unit
Landform(s): flood plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1165--Lundlake silty clay loam, depressional, 0 to 1 percent slopes

Lundlake, depressional

Extent: 85 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	silty clay loam	moderate	2.41 to 3.12 in	6.6 to 7.3
AB -- 14 to 35 in	loam	moderate	3.55 to 4.59 in	6.6 to 7.3
Bg -- 35 to 47 in	loam	moderate	1.77 to 2.24 in	6.6 to 7.8
Bkg -- 47 to 60 in	sandy loam	moderately rapid	1.30 to 1.95 in	7.4 to 7.8

Swedegrove

Extent: 10 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1165--Lundlake silty clay loam, depressional, 0 to 1 percent slopes

Grovecity

Extent: 5 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

1169--Corvuso-Lura, depressional complex, 0 to 2 percent slopes

Corvuso

Extent: 60 percent of the unit
Landform(s): rims on depressions on moraines, flats on moraines
Slope gradient: 0 to 2 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	clay loam	moderately slow	1.54 to 2.43 in	7.4 to 8.4
Bkg -- 11 to 28 in	clay	moderately slow	2.20 to 3.22 in	7.4 to 8.4
2BCg -- 28 to 80 in	clay loam	moderately slow	6.76 to 9.87 in	7.4 to 8.4

Lura, depressional

Extent: 30 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: clayey lacustrine sediments over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 24 in	silty clay	slow	3.36 to 4.08 in	6.1 to 7.3
Bg -- 24 to 31 in	silty clay	slow	0.99 to 1.20 in	6.1 to 7.3
Bkg -- 31 to 60 in	silty clay	moderately slow	3.16 to 5.46 in	7.4 to 8.4
2BCg -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

1169--Corvuso-Lura, depressional complex, 0 to 2 percent slopes

Kandiyohi

Extent: 10 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1171C--Newlondon-Strout complex, 6 to 12 percent slopes, eroded

Newlondon, eroded

Extent: 45 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	clay loam	moderately slow	1.13 to 1.28 in	6.6 to 7.8
Bk -- 7 to 38 in	clay loam	moderately slow	3.11 to 4.67 in	7.4 to 8.4
BC -- 38 to 80 in	clay loam	moderately slow	5.43 to 7.93 in	7.4 to 8.4

Strout, eroded

Extent: 45 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.27 to 1.72 in	6.1 to 7.3
Bw -- 9 to 23 in	clay loam	moderately slow	1.65 to 2.48 in	5.6 to 7.3
BC -- 23 to 80 in	clay loam	moderately slow	7.42 to 10.85 in	7.4 to 8.4

1171C--Newlondon-Strout complex, 6 to 12 percent slopes, eroded

Danielson

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

1172C--Sparta-Gardencity complex, 6 to 12 percent slopes

Sparta

Extent: 70 percent of the unit
Landform(s): outwash plains
Slope gradient: 6 to 12 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .05
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 18 in	loamy sand	moderately rapid	1.63 to 2.17 in	5.1 to 7.3
Bw -- 18 to 55 in	loamy fine sand	rapid	1.85 to 4.07 in	5.1 to 7.3
C -- 55 to 60 in	sand	rapid	0.19 to 0.33 in	5.1 to 7.8

Gardencity

Extent: 20 percent of the unit
Landform(s): outwash plains
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy glaciolacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	fine sandy loam	moderately rapid	1.13 to 1.42 in	6.1 to 7.3
Bw -- 7 to 24 in	stratified fine sand to very fine sandy loam	moderately rapid	1.86 to 2.88 in	5.6 to 7.3
C -- 24 to 60 in	stratified fine sand to silt loam	moderately rapid	3.58 to 6.09 in	6.1 to 8.4

1172C--Sparta-Gardencity complex, 6 to 12 percent slopes

Darfur

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1173--Muskego and Klossner soils, depressional, 0 to 1 percent slopes, frequently flooded

Muskego, frequently flooded

Extent: 45 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over coprogenic material
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 45 in	muck	moderately rapid	15.71 to 20.20 in	
Lco -- 45 to 60 in	mucky silt loam	slow	2.99 to 3.74 in	

Klossner, frequently flooded

Extent: 45 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 22 in	muck	moderately rapid	7.72 to 10.58 in	
2A -- 22 to 45 in	mucky silt loam	moderate	5.02 to 5.94 in	
2Bg -- 45 to 60 in	silt loam	moderate	2.69 to 3.29 in	

1173--Muskego and Klossner soils, depressional, 0 to 1 percent slopes, frequently flooded

Calco

Extent: 5 percent of the unit
Landform(s): flood plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Okoboji

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1174--Danielson clay loam, 1 to 3 percent slopes

Danielson

Extent: 85 percent of the unit
Landform(s): drainageways on moraines, swales on moraines
Slope gradient: 1 to 3 percent
Parent material: colluvium and fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.36 to 1.99 in	6.1 to 7.3
A1,A2,AB -- 9 to 36 in	silty clay	moderately slow	3.75 to 5.09 in	6.1 to 7.3
Bg1 -- 36 to 51 in	silty clay	moderately slow	1.07 to 2.92 in	6.1 to 7.3
2Bg2 -- 51 to 80 in	silty clay loam	slow	2.01 to 5.17 in	6.6 to 8.4

Lura

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1174--Danielson clay loam, 1 to 3 percent slopes

Strout

Extent: 5 percent of the unit
Landform(s): moraines
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1175--Swedegrove loam, 0 to 2 percent slopes

Swedegrove

Extent: 90 percent of the unit
Landform(s): flats on moraines
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	loam	moderately rapid	2.27 to 2.83 in	7.4 to 8.4
Bkg -- 14 to 20 in	sandy loam	moderately rapid	0.83 to 1.06 in	7.4 to 8.4
Cg -- 20 to 60 in	sandy loam	moderately rapid	3.98 to 5.96 in	7.4 to 7.8

Lundlake

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1176--Litchfield sandy loam, 0 to 2 percent slopes

Litchfield

Extent: 85 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 2 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .15
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 17 in	sandy loam	moderately rapid	2.20 to 2.54 in	6.1 to 7.3
Bw -- 17 to 33 in	loamy sand	rapid	1.45 to 1.78 in	6.6 to 7.3
Cg -- 33 to 60 in	sand	rapid	1.34 to 1.87 in	6.6 to 7.3

Darfur

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1176--Litchfield sandy loam, 0 to 2 percent slopes

Dassel

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1177C--Gardencity-Bold complex, 6 to 12 percent slopes, eroded

Gardencity, eroded

Extent: 70 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy glaciolacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	fine sandy loam	moderately rapid	2.08 to 2.60 in	6.1 to 7.3
Bw -- 13 to 25 in	very fine sandy loam	moderately rapid	1.34 to 2.07 in	5.6 to 7.3
C -- 25 to 60 in	stratified fine sand to silt loam	moderately rapid	3.46 to 5.89 in	6.1 to 8.4

Bold, eroded

Extent: 20 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 6 to 12 percent
Parent material: coarse-silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .49
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silt loam	moderate	1.49 to 1.70 in	7.4 to 8.4
Bk -- 7 to 60 in	silt loam	moderate	10.55 to 12.66 in	7.4 to 8.4

1177C--Gardencity-Bold complex, 6 to 12 percent slopes, eroded

Darfur

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Madelia

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1178--Uniongrove loam, 0 to 2 percent slopes

Uniongrove

Extent: 85 percent of the unit
Landform(s): swales on moraines
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	loam	moderately rapid	3.23 to 3.55 in	6.1 to 7.3
Bg -- 16 to 30 in	loam	moderately rapid	2.07 to 2.62 in	6.1 to 7.3
Cg -- 30 to 60 in	sandy loam	moderately rapid	2.99 to 4.49 in	7.4 to 7.8

Lundlake

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1178--Uniongrove loam, 0 to 2 percent slopes

Swedegrove

Extent: 5 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1184--Corvuso silty clay loam, 0 to 2 percent slopes

Corvuso

Extent: 85 percent of the unit
Landform(s): rims on depressions on moraines, flats on moraines
Slope gradient: 0 to 2 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	clay loam	moderately slow	1.54 to 2.43 in	7.4 to 8.4
Bkg -- 11 to 28 in	clay	moderately slow	2.20 to 3.22 in	7.4 to 8.4
2BCg -- 28 to 80 in	clay loam	moderately slow	6.76 to 9.87 in	7.4 to 8.4

Cosmos

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1184--Corvuso silty clay loam, 0 to 2 percent slopes

Lura

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

1185--Gardencity fine sandy loam, moderately wet, 0 to 2 percent slopes

Gardencity, moderately wet

Extent: 85 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy glaciolacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	fine sandy loam	moderately rapid	3.02 to 3.78 in	6.6 to 7.3
Bw -- 19 to 24 in	fine sandy loam	moderately rapid	0.56 to 0.87 in	6.1 to 7.3
C -- 24 to 60 in	stratified loamy fine sand to silt loam	moderately rapid	3.58 to 6.09 in	6.6 to 8.4

Darfur

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1185--Gardencity fine sandy loam, moderately wet, 0 to 2 percent slopes

Dassel

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1193--Cosmos silty clay, 0 to 2 percent slopes

Cosmos

Extent: 85 percent of the unit
Landform(s): flats on moraines, swales on moraines
Slope gradient: 0 to 2 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A,ABg -- 0 to 15 in	silty clay	slow	2.39 to 3.29 in	6.1 to 7.3
Btg -- 15 to 30 in	silty clay	slow	2.09 to 2.84 in	6.1 to 7.3
Btkg -- 30 to 36 in	silty clay	moderately slow	0.65 to 1.12 in	7.4 to 8.4
2Bkg -- 36 to 80 in	clay loam	moderately slow	4.41 to 6.61 in	7.4 to 8.4

Lura

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1193--Cosmos silty clay, 0 to 2 percent slopes

Corvuso

Extent: 5 percent of the unit
Landform(s): rims
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

1197--Cohoctah fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Cohoctah, occasionally flooded

Extent: 90 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: occasional
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 21 in	fine sandy loam	moderately rapid	2.71 to 4.59 in	6.1 to 7.8
A2 -- 21 to 36 in	fine sandy loam	moderately rapid	1.80 to 2.99 in	6.1 to 8.4
Cg -- 36 to 60 in	stratified loamy sand to sandy loam to loam	moderately rapid	1.92 to 4.80 in	6.1 to 8.4

Havelock

Extent: 10 percent of the unit
Landform(s): flood plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1203--Muskego, Blue Earth, and Houghton soils, ponded

Muskego, ponded

Extent: 30 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over coprogenic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa1 -- 0 to 10 in	muck	moderately rapid	3.44 to 4.43 in	
Oa2 -- 10 to 29 in	muck	moderately rapid	6.75 to 8.68 in	
Lco -- 29 to 60 in	mucky silt loam	slow	5.53 to 7.37 in	

Blue Earth, ponded

Extent: 30 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-silty coprogenic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .24
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 50 in	mucky silt loam	moderate	9.00 to 12.00 in	7.4 to 8.4
2Cg -- 50 to 60 in	mucky silt loam	moderate	1.77 to 2.36 in	7.4 to 8.4

1203--Muskego, Blue Earth, and Houghton soils, ponded

Houghton, ponded

Extent: 30 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 60 in	muck	moderately rapid	20.94 to 26.93 in	

Okoboji

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1204B--Reedslake loam, 2 to 5 percent slopes

Reedslake

Extent: 85 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 5 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	loam	moderate	2.36 to 2.60 in	5.6 to 7.3
Bt -- 12 to 26 in	clay loam	moderate	2.13 to 2.69 in	5.6 to 7.3
Bk,C -- 26 to 60 in	loam	moderate	4.74 to 6.09 in	7.4 to 7.8

Cordova

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1204B--Reedslake loam, 2 to 5 percent slopes

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1213C--Cokato-Storden complex, 6 to 12 percent slopes, eroded

Cokato, eroded

Extent: 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	loam	moderate	3.23 to 3.55 in	5.6 to 7.3
Bt -- 16 to 41 in	clay loam	moderate	3.72 to 4.71 in	5.6 to 7.3
Bk,C -- 41 to 60 in	loam	moderate	2.65 to 3.40 in	7.4 to 7.8

Storden, eroded

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	7.4 to 8.4
Bk -- 9 to 18 in	loam	moderate	1.36 to 1.72 in	7.4 to 8.4
C -- 18 to 60 in	loam	moderate	6.26 to 7.93 in	7.4 to 8.4

1213C--Cokato-Storden complex, 6 to 12 percent slopes, eroded

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Hamel

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1220C--Cokato-Storden-Hawick complex, 6 to 12 percent slopes, eroded

Cokato, eroded

Extent: 55 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bt -- 10 to 29 in	clay loam	moderate	2.89 to 3.67 in	5.6 to 7.3
Bk,C -- 29 to 60 in	loam	moderate	4.30 to 5.53 in	7.4 to 8.4

Storden, eroded

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: fine-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	7.4 to 8.4
Bk -- 9 to 60 in	loam	moderate	7.62 to 9.65 in	7.4 to 8.4

1220C--Cokato-Storden-Hawick complex, 6 to 12 percent slopes, eroded

Hawick, eroded

Extent: 15 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	gravelly sandy loam	rapid	0.24 to 1.02 in	6.1 to 7.8
Bw -- 8 to 33 in	gravelly loamy coarse sand	rapid	0.76 to 2.52 in	6.1 to 7.8
2C -- 33 to 60 in	gravelly coarse sand	very rapid	0.54 to 1.61 in	7.4 to 8.4

Glencoe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1220C--Cokato-Storden-Hawick complex, 6 to 12 percent slopes, eroded

Hamel

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1356--Water, miscellaneous

Water, miscellaneous

Extent: 100 percent of the unit
Landform(s):
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: unranked
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1383A--Shorewood silty clay loam, moderately wet, 0 to 3 percent slopes

Shorewood, moderately wet

Extent: 90 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 0 to 3 percent
Parent material: clayey lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silty clay loam	moderately slow	1.63 to 1.99 in	5.6 to 7.3
Bt -- 9 to 46 in	silty clay	moderately slow	4.81 to 5.92 in	5.1 to 7.3
Bk -- 46 to 60 in	silty clay loam	moderate	1.93 to 2.20 in	6.6 to 7.8

Rolfe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1383A--Shorewood silty clay loam, moderately wet, 0 to 3 percent slopes

Waldorf

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1384--Minneopa loam, 0 to 2 percent slopes

Minneopa

Extent: 85 percent of the unit
Landform(s): flats on outwash plains
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy outwash over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	loam	moderate	1.28 to 1.56 in	6.1 to 7.3
Bw -- 7 to 15 in	sandy loam	moderately rapid	1.10 to 1.50 in	6.1 to 7.3
2Bw -- 15 to 25 in	gravelly loamy sand	very rapid	0.31 to 0.82 in	6.1 to 7.3
2C -- 25 to 60 in	gravelly sand	very rapid	0.69 to 2.08 in	7.4 to 8.4

Biscay

Extent: 10 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1384--Minneopa loam, 0 to 2 percent slopes

Estherville

Extent: 5 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1385--Havelock loam, 0 to 2 percent slopes, frequently flooded

Havelock, frequently flooded

Extent: 90 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: fine-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 5w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 15 in	loam	moderate	2.99 to 3.29 in	7.4 to 8.4
Bg -- 15 to 38 in	loam	moderate	4.65 to 5.11 in	7.4 to 8.4
Cg -- 38 to 60 in	loam	moderately rapid	2.81 to 3.68 in	7.4 to 8.4

Calco

Extent: 10 percent of the unit
Landform(s): flood plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1387A--Collinwood silty clay loam, moderately wet, 0 to 3 percent slopes

Collinwood, moderately wet

Extent: 90 percent of the unit
Landform(s): hills on lake plains
Slope gradient: 0 to 3 percent
Parent material: clayey lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	silty clay loam	moderately slow	1.82 to 2.21 in	5.6 to 7.3
Bw -- 13 to 32 in	silty clay	moderately slow	2.46 to 3.02 in	5.6 to 7.3
Bk -- 32 to 60 in	silty clay loam	moderately slow	3.07 to 4.19 in	7.4 to 8.4

Rolfe

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1387A--Collinwood silty clay loam, moderately wet, 0 to 3 percent slopes

Waldorf

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

1391B--Wadenill-Sunburg complex, 2 to 6 percent slopes

Wadenill

Extent: 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bw -- 9 to 25 in	loam	moderately rapid	1.94 to 3.07 in	5.6 to 7.3
Bk -- 25 to 60 in	fine sandy loam	moderately rapid	3.81 to 6.58 in	7.4 to 8.4

Sunburg

Extent: 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: coarse-loamy till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	fine sandy loam	moderately rapid	1.13 to 1.28 in	6.6 to 8.4
Bk -- 7 to 60 in	sandy loam	moderately rapid	5.80 to 10.02 in	7.4 to 8.4

1391B--Wadenill-Sunburg complex, 2 to 6 percent slopes

Lundlake

Extent: 5 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

Uniongrove

Extent: 5 percent of the unit
Landform(s): drainageways
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1406--Medo, Dassel, and Biscay soils, ponded, 0 to 1 percent slopes

Medo, ponded

Extent: 30 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 20 in	muck	moderately rapid	7.03 to 9.04 in	
2A -- 20 to 28 in	mucky silt loam	moderately rapid	1.02 to 1.57 in	
2Bg -- 28 to 34 in	sandy loam	moderately rapid	0.77 to 1.18 in	
3Bkg -- 34 to 60 in	fine sand	rapid	0.78 to 2.60 in	

Dassel, ponded

Extent: 30 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 1 percent
Parent material: coarse-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .20
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 14 in	fine sandy loam	moderately rapid	2.27 to 2.83 in	5.6 to 7.3
2AB -- 14 to 31 in	stratified loamy fine sand to fine sandy loam	moderately rapid	2.03 to 2.88 in	5.6 to 7.3
2Bg -- 31 to 60 in	stratified coarse sand to loamy sand	rapid	2.30 to 2.87 in	6.1 to 7.8

1406--Medo, Dassel, and Biscay soils, ponded, 0 to 1 percent slopes

Biscay, ponded

Extent: 30 percent of the unit
Landform(s): depressions on outwash plains
Slope gradient: 0 to 1 percent
Parent material: fine-loamy outwash over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .28
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 10 in	mucky loam	moderate	1.97 to 2.17 in	6.1 to 7.8
Bg -- 10 to 29 in	loam	moderate	3.28 to 3.67 in	6.6 to 7.8
2Cg -- 29 to 60 in	stratified coarse sand to loamy sand	very rapid	0.61 to 1.23 in	7.4 to 8.4

Houghton

Extent: 10 percent of the unit
Landform(s): depressions
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1801B--Gardencity very fine sandy loam, 2 to 6 percent slopes

Gardencity

Extent: 85 percent of the unit
Landform(s): hills on outwash plains
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy glaciolacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .37
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	very fine sandy loam	moderately rapid	2.08 to 2.60 in	6.1 to 7.3
Bw -- 13 to 34 in	very fine sandy loam	moderately rapid	2.30 to 3.55 in	5.6 to 7.3
C -- 34 to 60 in	stratified loamy very fine sand to very fine sandy loam	moderately rapid	2.60 to 4.42 in	6.1 to 8.4

Sparta

Extent: 5 percent of the unit
Landform(s): outwash plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

1801B--Gardencity very fine sandy loam, 2 to 6 percent slopes

Truman

Extent: 5 percent of the unit
Landform(s): lake plains
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*

L13A--Klossner muck, dpressional, 0 to 1 percent slopes

Klossner, drained

Extent: 65 to 85 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: herbaceous organic material over loamy glaciofluvial deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Op -- 0 to 10 in	muck	moderately rapid	3.44 to 4.72 in	
Oa -- 10 to 26 in	muck	moderately rapid	5.65 to 7.75 in	
2A1 -- 26 to 36 in	mucky silty clay loam	moderate	2.17 to 2.56 in	
2A2 -- 36 to 48 in	silty clay loam	moderate	2.20 to 2.69 in	
2Cg -- 48 to 80 in	loam	moderate	4.78 to 6.06 in	

L33A--Kandiyohi clay, 0 to 2 percent slopes

Kandiyohi

Extent: 70 to 90 percent of the unit
Landform(s): flats on moraines, rises on moraines
Slope gradient: 0 to 2 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	clay	moderately slow	1.57 to 2.17 in	6.1 to 7.3
Bw -- 10 to 23 in	clay	moderately slow	1.82 to 2.47 in	6.1 to 7.3
Bkg -- 23 to 29 in	clay	moderately slow	0.82 to 1.20 in	7.4 to 8.4
2Bkg -- 29 to 80 in	clay loam	moderately slow	5.08 to 7.62 in	7.4 to 8.4

L33B--Kandiyohi clay, 2 to 5 percent slopes

Kandiyohi

Extent: 70 to 90 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 5 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	clay	moderately slow	1.57 to 2.17 in	6.1 to 7.3
Bw -- 10 to 23 in	clay	moderately slow	1.82 to 2.47 in	6.1 to 7.3
Bkg -- 23 to 29 in	clay	moderately slow	0.82 to 1.20 in	7.4 to 8.4
2Bkg -- 29 to 80 in	clay loam	moderately slow	5.08 to 7.62 in	7.4 to 8.4

L34A--Cosmos silty clay, 0 to 2 percent slopes

Cosmos

Extent: 75 to 95 percent of the unit
Landform(s): flats on moraines, swales on moraines
Slope gradient: 0 to 2 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A,ABg -- 0 to 15 in	silty clay	slow	2.39 to 3.29 in	6.1 to 7.3
Btg -- 15 to 30 in	silty clay	slow	2.09 to 2.84 in	6.1 to 7.3
Btkg -- 30 to 36 in	silty clay	moderately slow	0.65 to 1.12 in	7.4 to 8.4
2Bkg -- 36 to 80 in	clay loam	moderately slow	4.41 to 6.61 in	7.4 to 8.4

L83A--Webster clay loam, 0 to 2 percent slopes

Webster

Extent: 50 to 85 percent of the unit
Landform(s): flats on moraines, swales on moraines
Slope gradient: 0 to 2 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	clay loam	moderate	3.59 to 3.97 in	6.6 to 7.3
Bg -- 19 to 26 in	clay loam	moderate	1.13 to 1.28 in	6.6 to 7.8
BCg,Cg -- 26 to 60 in	loam	moderate	5.08 to 6.43 in	7.4 to 8.4

L84A--Glencoe clay loam, depressional, 0 to 1 percent slopes

Glencoe, depressional

Extent: 75 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 24 in	clay loam	moderate	4.32 to 5.28 in	6.1 to 7.8
ABg -- 24 to 35 in	clay loam	moderate	1.98 to 2.43 in	6.1 to 7.8
Bg -- 35 to 48 in	loam	moderate	1.95 to 2.47 in	6.6 to 7.8
Cg -- 48 to 60 in	loam	moderate	1.77 to 2.24 in	7.4 to 8.4

L85A--Nicollet clay loam, 1 to 3 percent slopes

Nicollet

Extent: 70 to 95 percent of the unit
Landform(s): flats on moraines, rises on moraines
Slope gradient: 1 to 3 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 17 in	clay loam	moderate	2.88 to 3.72 in	5.6 to 7.3
Bw,Bg -- 17 to 33 in	clay loam	moderate	2.42 to 3.07 in	5.6 to 7.3
Bg -- 33 to 36 in	clay loam	moderate	0.41 to 0.52 in	7.4 to 8.4
Cg -- 36 to 60 in	loam	moderate	3.60 to 4.56 in	7.4 to 8.4

L107A--Canisteo-Glencoe, depressional complex, 0 to 2 percent slopes

Canisteo

Extent: 30 to 70 percent of the unit
Landform(s): rims on moraines
Slope gradient: 0 to 2 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 18 in	clay loam	moderate	3.26 to 3.98 in	7.4 to 8.4
Bkg -- 18 to 39 in	loam	moderate	2.50 to 3.76 in	7.4 to 8.4
Cg -- 39 to 80 in	loam	moderate	6.14 to 7.78 in	7.4 to 8.4

Glencoe, depressional

Extent: 15 to 55 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	clay loam	moderate	1.77 to 2.17 in	6.1 to 7.8
A,ABg -- 10 to 35 in	clay loam	moderate	4.54 to 5.54 in	6.1 to 7.8
Bg -- 35 to 48 in	loam	moderate	1.95 to 2.47 in	6.6 to 7.8
Cg -- 48 to 60 in	loam	moderate	1.77 to 2.24 in	7.4 to 8.4

L163A--Okoboji silty clay loam, depressional, 0 to 1 percent slopes

Okoboji, depressional

Extent: 70 to 95 percent of the unit
Landform(s): depressions on lake plains, depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: lacustrine sediments over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 26 in	silty clay loam	moderately slow	5.46 to 5.98 in	6.1 to 7.8
Bg -- 26 to 42 in	silty clay	moderately slow	2.91 to 3.23 in	6.6 to 7.8
Cg -- 42 to 60 in	silty clay loam	moderately slow	3.19 to 3.54 in	6.6 to 8.4

L164A--Lura silty clay, depressional, firm substratum, 0 to 1 percent slopes

Lura, firm substratum, depressional

Extent: 85 to 95 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: clayey lacustrine sediments over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 24 in	silty clay	slow	3.36 to 4.08 in	6.1 to 7.3
Bg -- 24 to 31 in	silty clay	slow	0.99 to 1.20 in	6.1 to 7.3
Bkg -- 31 to 60 in	silty clay	moderately slow	3.16 to 5.46 in	7.4 to 8.4
2BCg -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

L166C2--Newlondon-Strout complex, 6 to 12 percent slopes, moderately eroded

Newlondon, moderately eroded

Extent: 35 to 55 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	clay loam	moderately slow	1.13 to 1.28 in	6.6 to 7.8
Bk -- 7 to 38 in	clay loam	moderately slow	3.11 to 4.67 in	7.4 to 8.4
BC -- 38 to 80 in	clay loam	moderately slow	5.43 to 7.93 in	7.4 to 8.4

Strout, moderately eroded

Extent: 35 to 55 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.27 to 1.72 in	6.1 to 7.3
Bw -- 9 to 23 in	clay loam	moderately slow	1.65 to 2.48 in	5.6 to 7.3
BC -- 23 to 80 in	clay loam	moderately slow	7.42 to 10.85 in	7.4 to 8.4

L166D2--Newlondon-Strout complex, 12 to 18 percent slopes, moderately eroded

Newlondon, moderately eroded

Extent: 50 to 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	clay loam	moderately slow	1.13 to 1.28 in	6.6 to 7.8
Bk -- 7 to 38 in	clay loam	moderately slow	3.11 to 4.67 in	7.4 to 8.4
BC -- 38 to 80 in	clay loam	moderately slow	5.43 to 7.93 in	7.4 to 8.4

Strout, moderately eroded

Extent: 20 to 30 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.27 to 1.72 in	6.1 to 7.3
Bw -- 9 to 19 in	clay loam	moderately slow	1.18 to 1.77 in	5.6 to 7.3
BC -- 19 to 80 in	clay loam	moderately slow	7.93 to 11.59 in	7.4 to 8.4

L179A--Corvuso-Lura, depressional, firm substratum complex, 0 to 2 percent slopes

Corvuso

Extent: 50 to 70 percent of the unit
Landform(s): rims on depressions on moraines, flats on moraines
Slope gradient: 0 to 2 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	clay loam	moderately slow	1.54 to 2.43 in	7.4 to 8.4
Bkg -- 11 to 28 in	clay	moderately slow	2.20 to 3.22 in	7.4 to 8.4
2BCg -- 28 to 80 in	clay loam	moderately slow	6.76 to 9.87 in	7.4 to 8.4

Lura, firm substratum, depressional

Extent: 30 to 50 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: clayey lacustrine sediments over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 24 in	silty clay	slow	3.36 to 4.08 in	6.1 to 7.3
Bg -- 24 to 31 in	silty clay	slow	0.99 to 1.20 in	6.1 to 7.3
Bkg -- 31 to 60 in	silty clay	moderately slow	3.16 to 5.46 in	7.4 to 8.4
2BCg -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

L184A--Corvuso silty clay loam, 0 to 2 percent slopes

Corvuso

Extent: 75 to 95 percent of the unit
Landform(s): rims on depressions on moraines, flats on moraines
Slope gradient: 0 to 2 percent
Parent material: fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	clay loam	moderately slow	1.54 to 2.43 in	7.4 to 8.4
Bkg -- 11 to 28 in	clay	moderately slow	2.20 to 3.22 in	7.4 to 8.4
2BCg -- 28 to 80 in	clay loam	moderately slow	6.76 to 9.87 in	7.4 to 8.4

L185B--Strout-Arkton complex, 2 to 6 percent slopes

Strout

Extent: 60 to 80 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,AB -- 0 to 10 in	clay	moderately slow	1.38 to 1.87 in	6.1 to 7.3
Bw -- 10 to 24 in	clay loam	moderately slow	1.70 to 2.55 in	5.6 to 7.3
Bk -- 24 to 80 in	clay loam	moderately slow	5.59 to 8.39 in	7.4 to 8.4

Arkton

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.36 to 1.72 in	6.6 to 8.4
Bk1 -- 9 to 25 in	clay	moderately slow	1.61 to 3.07 in	7.4 to 8.4
Bk2 -- 25 to 80 in	clay loam	moderately slow	5.47 to 8.21 in	7.4 to 8.4

L186A--Danielson-Danielson, overwash complex, 1 to 4 percent slopes

Danielson

Extent: 60 to 80 percent of the unit
Landform(s): drainageways on moraines, swales on moraines
Slope gradient: 0 to 4 percent
Parent material: colluvium and fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.36 to 1.99 in	6.1 to 7.3
A1,A2,AB -- 9 to 36 in	silty clay	moderately slow	3.75 to 5.09 in	6.1 to 7.3
Bg1 -- 36 to 51 in	silty clay	moderately slow	1.07 to 2.92 in	6.1 to 7.3
2Bg2 -- 51 to 80 in	silty clay loam	slow	2.01 to 5.17 in	6.6 to 8.4

Danielson, overwash

Extent: 15 to 25 percent of the unit
Landform(s): drainageways on moraines, swales on moraines
Slope gradient: 2 to 4 percent
Parent material: colluvium and fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.36 to 1.99 in	6.1 to 7.3
A1 -- 9 to 13 in	clay loam	moderately slow	0.53 to 0.78 in	6.1 to 7.3
A2,A3,AB -- 13 to 36 in	silty clay	moderately slow	3.25 to 4.41 in	6.1 to 7.3
Bg -- 36 to 51 in	silty clay	moderately slow	1.07 to 2.92 in	6.1 to 7.3
2Bg -- 51 to 80 in	silty clay loam	slow	2.01 to 5.17 in	6.6 to 8.4

L187A--Klossner, firm substratum, and Lura soils, ponded, 0 to 1 percent slopes

Klossner, firm substratum, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material/loamy sediments over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 25 in	muck	moderately rapid	8.82 to 11.34 in	
2A,AC -- 25 to 60 in	silty clay loam	moderate	4.85 to 7.62 in	
3BCg -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

Lura, firm substratum, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: clayey lacustrine sediments over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .24
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 28 in	silty clay loam	slow	3.91 to 4.75 in	6.1 to 7.3
Bg -- 28 to 60 in	silty clay	slow	4.46 to 5.42 in	6.1 to 7.3
2BCg -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

L191A--Blue Earth, Houghton, and Klossner soils, ponded, firm substratum, 0 to 1 percent slopes

Blue Earth, firm substratum, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-silty coprogenic material over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .24
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 50 in	mucky silt loam	moderate	9.00 to 12.00 in	7.4 to 8.4
AC -- 50 to 60 in	mucky silt loam	moderate	1.77 to 2.36 in	7.4 to 8.4
2Cg -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

Houghton, firm substratum, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 60 in	muck	moderately rapid	20.94 to 26.93 in	
2BCg -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

L191A--Blue Earth, Houghton, and Klossner soils, ponded, firm substratum, 0 to 1 percent slopes

Klossner, firm substratum, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material/loamy sediments over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Oa --	0 to 25 in	muck	moderately rapid	8.82 to 11.34 in	
2A,AC --	25 to 60 in	silty clay loam	moderate	4.85 to 7.62 in	
2BCg --	60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

L199A--Muskego-Klossner, depressional, firm substratum complex, 0 to 1 percent slopes

Muskego, drained, firm substratum

Extent: 25 to 60 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material over coprogenic material over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Op -- 0 to 10 in	muck	moderately rapid	3.44 to 4.43 in	
Oa -- 10 to 40 in	muck	moderately rapid	10.61 to 13.64 in	
Lco -- 40 to 60 in	mucky silt loam	slow	3.54 to 4.72 in	
2BCg -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

Klossner, drained, firm substratum

Extent: 20 to 50 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material/loamy sediments over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 28 in	muck	moderately rapid	9.78 to 13.42 in	
2A -- 28 to 33 in	silt loam	moderate	1.13 to 1.33 in	
2BCg1 -- 33 to 60 in	loam	moderate	4.02 to 5.09 in	
2BCg2 -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

L200A--Klossner muck, depressional, firm substratum, 0 to 1 percent slopes

Klossner, drained, firm substratum

Extent: 65 to 85 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: muck herbaceous organic material/loamy sediments over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 28 in	muck	moderately rapid	9.78 to 13.42 in	
2A -- 28 to 33 in	silt loam	moderate	1.13 to 1.33 in	
2BCg1 -- 33 to 60 in	loam	moderate	4.02 to 5.09 in	
3BCg2 -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

L204C2--Newlondon-Strout-Hawick complex, 6 to 12 percent slopes, moderately eroded

Newlondon

Extent: 50 to 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	clay loam	moderately slow	1.13 to 1.28 in	6.6 to 7.8
Bk -- 7 to 38 in	clay loam	moderately slow	3.11 to 4.67 in	7.4 to 8.4
BC -- 38 to 80 in	clay loam	moderately slow	5.43 to 7.93 in	7.4 to 8.4

Strout

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.27 to 1.72 in	6.1 to 7.3
Bw -- 9 to 23 in	clay loam	moderately slow	1.65 to 2.48 in	5.6 to 7.3
BC -- 23 to 80 in	clay loam	moderately slow	7.42 to 10.85 in	7.4 to 8.4

L204C2--Newlondon-Strout-Hawick complex, 6 to 12 percent slopes, moderately eroded

Hawick

Extent: 15 to 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 10 in	loamy sand	rapid	0.98 to 1.18 in	6.1 to 7.8
Bw --	10 to 21 in	loamy sand	rapid	0.33 to 1.10 in	6.1 to 7.8
C --	21 to 60 in	sand	very rapid	0.78 to 2.34 in	7.4 to 8.4

L204D2--Newlondon-Strout-Hawick complex, 12 to 18 percent slopes, moderately eroded

Newlondon

Extent: 55 to 75 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	clay loam	moderately slow	1.13 to 1.28 in	6.6 to 7.8
Bk -- 7 to 38 in	clay loam	moderately slow	3.11 to 4.67 in	7.4 to 8.4
BC -- 38 to 80 in	clay loam	moderately slow	5.43 to 7.93 in	7.4 to 8.4

Strout

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.27 to 1.72 in	6.1 to 7.3
Bw -- 9 to 19 in	clay loam	moderately slow	1.18 to 1.77 in	5.6 to 7.3
BC -- 19 to 80 in	clay loam	moderately slow	7.93 to 11.59 in	7.4 to 8.4

L204D2--Newlondon-Strout-Hawick complex, 12 to 18 percent slopes, moderately eroded

Hawick

Extent: 15 to 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .10
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,AB -- 0 to 11 in	gravelly loamy coarse sand	rapid	1.10 to 1.32 in	6.1 to 7.8
Bw -- 11 to 16 in	gravelly loamy coarse sand	rapid	0.15 to 0.51 in	6.1 to 7.8
C -- 16 to 60 in	gravelly coarse sand	very rapid	0.87 to 2.62 in	7.4 to 8.4

L205A--Blue Earth mucky silty clay loam, depressional, firm substratum, 0 to 1 percent slopes

Blue Earth, drained, firm substratum

Extent: 80 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: fine-silty coprogenic material over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 8 in	mucky silty clay loam	moderate	1.42 to 1.89 in	7.4 to 8.4
AC --	8 to 60 in	mucky silt loam	moderate	9.35 to 12.47 in	7.4 to 8.4
2Cg --	60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

L206B--Strout-Arkton-Estherville complex, 2 to 6 percent slopes

Strout

Extent: 50 to 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,AB -- 0 to 10 in	clay	moderately slow	1.38 to 1.87 in	6.1 to 7.3
Bw -- 10 to 24 in	clay loam	moderately slow	1.70 to 2.55 in	5.6 to 7.3
Bk -- 24 to 80 in	clay loam	moderately slow	5.59 to 8.39 in	7.4 to 8.4

Arkton

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderately slow	1.36 to 1.72 in	6.6 to 8.4
Bk1 -- 9 to 25 in	clay	moderately slow	1.61 to 3.07 in	7.4 to 8.4
Bk2 -- 25 to 80 in	clay loam	moderately slow	5.47 to 8.21 in	7.4 to 8.4

L206B--Strout-Arkton-Estherville complex, 2 to 6 percent slopes

Estherville

Extent: 15 to 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	sandy loam	moderately rapid	1.69 to 2.34 in	5.6 to 7.3
Bw1 -- 13 to 18 in	sandy loam	moderately rapid	0.61 to 0.85 in	5.6 to 7.3
2Bw2 -- 18 to 23 in	loamy coarse sand	rapid	0.10 to 0.20 in	5.6 to 7.3
2C -- 23 to 60 in	gravelly coarse sand	rapid	0.74 to 1.48 in	6.6 to 8.4

L210F--Arkton-Strout complex, 18 to 40 percent slopes

Arkton

Extent: 50 to 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .10
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 9 in	clay	moderately slow	1.18 to 1.72 in	6.6 to 8.4
Bk -- 9 to 60 in	clay	moderately slow	5.08 to 9.65 in	7.4 to 8.4
BCk -- 60 to 80 in	clay loam	moderately slow	2.61 to 3.81 in	7.4 to 8.4

Strout

Extent: 20 to 50 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: thin discontinuous fine textured mantle over firm till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A, AB -- 0 to 12 in	clay loam	moderately slow	1.65 to 2.24 in	6.1 to 7.3
Bw -- 12 to 20 in	clay loam	moderately slow	0.99 to 1.49 in	5.6 to 7.3
Bk -- 20 to 50 in	clay	moderately slow	2.99 to 5.69 in	7.4 to 8.4
BCk -- 50 to 80 in	clay loam	moderately slow	3.89 to 5.69 in	7.4 to 8.4

L307B--Koronis loam, 2 to 6 percent slopes

Koronis

Extent: 70 to 90 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderately rapid	1.57 to 1.73 in	5.6 to 7.3
Bt -- 8 to 31 in	sandy clay loam	moderately rapid	3.48 to 4.41 in	5.6 to 7.3
Bk -- 31 to 43 in	fine sandy loam	moderately rapid	1.30 to 2.24 in	7.4 to 8.4
C -- 43 to 80 in	fine sandy loam	moderately rapid	4.07 to 5.92 in	7.4 to 8.4

L307C2--Koronis loam, 6 to 12 percent slopes, moderately eroded

Koronis, moderately eroded

Extent: 65 to 80 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderately rapid	1.57 to 1.73 in	5.6 to 7.3
Bt -- 8 to 31 in	sandy clay loam	moderately rapid	3.48 to 4.41 in	5.6 to 7.3
Bk -- 31 to 43 in	fine sandy loam	moderately rapid	1.30 to 2.24 in	7.4 to 8.4
C -- 43 to 80 in	fine sandy loam	moderately rapid	4.07 to 5.92 in	7.4 to 8.4

L307E--Koronis loam, 18 to 40 percent slopes

Koronis

Extent: 60 to 80 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	loam	moderately rapid	1.42 to 1.56 in	5.6 to 7.3
Bt -- 7 to 28 in	sandy clay loam	moderately rapid	3.13 to 3.96 in	5.6 to 7.3
Bk -- 28 to 80 in	fine sandy loam	moderately rapid	5.72 to 8.31 in	7.4 to 8.4

L315C2--Sunburg-Wadenill-Hawick complex, 6 to 12 percent slopes, moderately eroded

Sunburg, moderately eroded

Extent: 30 to 50 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.6 to 8.4
Bk -- 8 to 20 in	fine sandy loam	moderately rapid	1.34 to 2.32 in	7.4 to 8.4
C -- 20 to 80 in	fine sandy loam	moderately rapid	6.58 to 9.57 in	7.4 to 8.4

Wadenill, moderately eroded

Extent: 20 to 40 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bw -- 10 to 24 in	sandy loam	moderately rapid	1.70 to 2.69 in	5.6 to 7.3
C -- 24 to 60 in	fine sandy loam	moderately rapid	3.94 to 6.81 in	7.4 to 8.4

L315C2--Sunburg-Wadenill-Hawick complex, 6 to 12 percent slopes, moderately eroded

Hawick

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 10 in	gravelly loamy coarse sand	rapid	0.98 to 1.18 in	6.1 to 7.8
Bw --	10 to 14 in	loamy coarse sand	rapid	0.13 to 0.43 in	6.1 to 7.8
C --	14 to 60 in	coarse sand	very rapid	0.91 to 2.74 in	7.4 to 8.4

L315D2--Sunburg-Wadenill-Hawick complex, 12 to 18 percent slopes, moderately eroded

Sunburg, moderately eroded

Extent: 30 to 50 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	sandy loam	moderate	1.42 to 1.56 in	6.6 to 8.4
C -- 7 to 60 in	fine sandy loam	moderately rapid	5.80 to 8.44 in	7.4 to 8.4

Wadenill, moderately eroded

Extent: 20 to 40 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bw -- 10 to 24 in	sandy loam	moderately rapid	1.70 to 2.69 in	5.6 to 7.3
C -- 24 to 60 in	fine sandy loam	moderately rapid	3.94 to 6.81 in	7.4 to 8.4

L315D2--Sunburg-Wadenill-Hawick complex, 12 to 18 percent slopes, moderately eroded

Hawick

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 10 in	loamy sand	rapid	0.98 to 1.18 in	6.1 to 7.8
Bw --	10 to 14 in	loamy coarse sand	rapid	0.13 to 0.43 in	6.1 to 7.8
C --	14 to 60 in	coarse sand	very rapid	0.91 to 2.74 in	7.4 to 8.4

L317A--Barry loam, 0 to 2 percent slopes

Barry

Extent: 75 to 90 percent of the unit
Landform(s): swales on moraines
Slope gradient: 0 to 2 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 11 in	loam	moderately rapid	1.87 to 2.09 in	6.1 to 7.3
Btg -- 11 to 33 in	sandy clay loam	moderate	3.31 to 3.97 in	6.1 to 7.3
Bkg -- 33 to 60 in	sandy loam	moderately rapid	2.94 to 3.75 in	7.4 to 7.8
Cg -- 60 to 80 in	sandy loam	moderately rapid	2.21 to 3.21 in	7.4 to 8.4

L318A--Lundlake silty clay loam, 0 to 1 percent slopes

Lundlake

Extent: 80 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: colluvium over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1,A2 -- 0 to 28 in	silty clay loam	moderate	4.75 to 6.15 in	5.6 to 7.3
AB -- 28 to 36 in	loam	moderate	1.34 to 1.73 in	6.6 to 7.3
2Bg1,2Bg2 -- 36 to 72 in	sandy loam	moderately rapid	3.62 to 5.43 in	6.6 to 7.8
2Cg -- 72 to 80 in	sandy loam	moderately rapid	0.79 to 1.18 in	7.4 to 7.8

L319A--Swedegrove-Lundlake complex, 0 to 2 percent slopes

Swedegrove

Extent: 50 to 80 percent of the unit
Landform(s): rims on moraines
Slope gradient: 0 to 2 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,Ak -- 0 to 14 in	loam	moderately rapid	2.27 to 2.83 in	7.4 to 8.4
Bkg1,Bkg2 -- 14 to 60 in	loam	moderately rapid	6.39 to 8.22 in	7.4 to 8.4
Cg -- 60 to 80 in	sandy loam	moderately rapid	2.01 to 3.01 in	7.4 to 8.4

Lundlake

Extent: 15 to 25 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: colluvium over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1,A2 -- 0 to 28 in	silty clay loam	moderate	4.75 to 6.15 in	5.6 to 7.3
AB -- 28 to 36 in	loam	moderate	1.34 to 1.73 in	6.6 to 7.3
2Bg1,2Bg2 -- 36 to 72 in	sandy loam	moderately rapid	3.62 to 5.43 in	6.6 to 7.8
2Cg -- 72 to 80 in	sandy loam	moderately rapid	0.79 to 1.18 in	7.4 to 7.8

L320A--Muskego and Klossner soils, lundlake catena, 0 to 1 percent slopes, frequently flooded

Muskego, frequently flooded

Extent: 30 to 100 percent of the unit
Landform(s): flats on flood plains
Slope gradient: 0 to 1 percent
Parent material: organic material over coprogenous earth
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 6w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:			*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa1	--	0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa2	--	9 to 36 in	muck	moderately rapid	9.37 to 12.05 in	
Lco	--	36 to 60 in	coprogenous earth	slow	4.32 to 5.76 in	7.4 to 8.4

Klossner, frequently flooded

Extent: 30 to 100 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 1 percent
Parent material: organic material over loamy glaciofluvial deposits
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 6w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:			*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa	--	0 to 26 in	muck	moderately rapid	9.09 to 12.47 in	
2A1	--	26 to 33 in	silt loam	moderate	1.56 to 1.84 in	6.1 to 7.4
2A2	--	33 to 40 in	loam	moderate	1.28 to 1.56 in	6.1 to 7.4
2Cg	--	40 to 80 in	sandy loam	moderately rapid	3.98 to 5.96 in	7.4 to 7.8

L321A--Swedegrove loam, 0 to 2 percent slopes

Swedegrove

Extent: 75 to 95 percent of the unit
Landform(s): rims on moraines
Slope gradient: 0 to 2 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,Ak -- 0 to 14 in	loam	moderately rapid	2.27 to 2.83 in	7.4 to 8.4
Bkg1,Bkg2 -- 14 to 60 in	loam	moderately rapid	6.39 to 8.22 in	7.4 to 8.4
Cg -- 60 to 80 in	sandy loam	moderately rapid	2.01 to 3.01 in	7.4 to 8.4

L322A--Uniongrove loam, 0 to 2 percent slopes

Uniongrove

Extent: 70 to 90 percent of the unit
Landform(s): swales on moraines
Slope gradient: 0 to 2 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	loam	moderately rapid	3.23 to 3.55 in	6.1 to 7.3
Bg1,Bg2 -- 16 to 30 in	loam	moderately rapid	2.07 to 2.62 in	6.1 to 7.3
Bkg1,Bkg2 -- 30 to 60 in	sandy loam	moderately rapid	2.99 to 4.49 in	7.4 to 7.8
Cg -- 60 to 80 in	sandy loam	moderately rapid	2.01 to 3.01 in	7.4 to 7.8

L323A--Crowriver loam, 0 to 2 percent slopes

Crowriver

Extent: 85 to 100 percent of the unit
Landform(s): rims on moraines
Slope gradient: 0 to 2 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Apk,Ak -- 0 to 15 in	loam	moderately rapid	2.09 to 2.99 in	7.4 to 8.4
Bkg1 -- 15 to 22 in	loam	moderately rapid	0.85 to 1.28 in	7.4 to 8.4
Bkg2 -- 22 to 60 in	sandy loam	moderately rapid	3.78 to 5.67 in	7.4 to 7.8

L324A--Forestcity, overwash-Forestcity complex, 1 to 4 percent slopes

Forestcity, overwash

Extent: 35 to 55 percent of the unit
Landform(s): drainageways on moraines
Slope gradient: 2 to 4 percent
Parent material: colluvium over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1 -- 0 to 36 in	fine sandy loam	moderately rapid	5.02 to 5.73 in	6.1 to 7.3
A2,AB -- 36 to 43 in	loam	moderate	0.99 to 1.20 in	6.1 to 7.3
2Btg -- 43 to 60 in	loam	moderately rapid	1.86 to 2.88 in	5.6 to 7.3
2BCg -- 60 to 80 in	fine sandy loam	moderately rapid	2.01 to 3.01 in	7.4 to 7.8

Forestcity

Extent: 30 to 50 percent of the unit
Landform(s): drainageways on moraines
Slope gradient: 1 to 3 percent
Parent material: colluvium over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1 -- 0 to 36 in	fine sandy loam	moderately rapid	5.02 to 5.73 in	6.1 to 7.3
A2,AB -- 36 to 43 in	loam	moderate	0.99 to 1.20 in	6.1 to 7.3
2Btg -- 43 to 60 in	loam	moderately rapid	1.86 to 2.88 in	5.6 to 7.3
2BCg -- 60 to 80 in	fine sandy loam	moderately rapid	2.01 to 3.01 in	7.4 to 7.8

L325A--Crowriver-Lundlake complex, 0 to 2 percent slopes

Crowriver

Extent: 30 to 55 percent of the unit
Landform(s): rims on moraines
Slope gradient: 0 to 2 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:			*Texture*	*Permeability*	*Available water capacity*	*pH*
Apk,Ak	--	0 to 13 in	fine sandy loam	moderately rapid	1.82 to 2.60 in	7.4 to 8.4
ABk	--	13 to 17 in	fine sandy loam	moderately rapid	0.47 to 0.71 in	7.4 to 8.4
Bkg1,Bg2,Bg3	--	17 to 60 in	sandy loam	moderately rapid	4.29 to 6.44 in	7.4 to 7.8
Cg	--	60 to 80 in	sandy loam	moderately rapid	2.01 to 3.01 in	7.4 to 7.8

Lundlake

Extent: 20 to 45 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: colluvium over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:			*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1,A2	--	0 to 28 in	silty clay loam	moderate	4.75 to 6.15 in	5.6 to 7.3
AB	--	28 to 36 in	loam	moderate	1.34 to 1.73 in	6.6 to 7.3
2Bg1,2Bg2	--	36 to 72 in	sandy loam	moderately rapid	3.62 to 5.43 in	6.6 to 7.8
2Cg	--	72 to 80 in	sandy loam	moderately rapid	0.79 to 1.18 in	7.4 to 7.8

L326B--Rohrbeck-Koronis complex, 1 to 6 percent slopes

Rohrbeck

Extent: 25 to 60 percent of the unit
Landform(s): hills on moraines
Slope gradient: 1 to 5 percent
Parent material: outwash over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	loamy sand	rapid	0.47 to 0.71 in	6.1 to 7.3
E -- 6 to 25 in	loamy sand	rapid	1.35 to 2.12 in	5.6 to 6.5
2Bt -- 25 to 41 in	sandy loam	moderately rapid	2.36 to 2.83 in	5.6 to 7.3
2Bk -- 41 to 60 in	sandy loam	moderately rapid	2.83 to 3.40 in	7.4 to 7.8
2C -- 60 to 80 in	fine sandy loam	moderately rapid	2.21 to 3.21 in	7.4 to 8.4

Koronis

Extent: 15 to 40 percent of the unit
Landform(s): hills on moraines
Slope gradient: 3 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.63 in	5.6 to 7.3
Bt,BC -- 9 to 28 in	sandy clay loam	moderately rapid	2.83 to 3.59 in	5.6 to 7.3
C -- 28 to 80 in	fine sandy loam	moderately rapid	5.72 to 8.31 in	7.4 to 8.4

L330A--Muskego, Blue Earth and Houghton soils, lundlake catena, 0 to 1 percent slopes, ponded

Muskego, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material over coprogenous earth
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa1 -- 0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa2 -- 9 to 36 in	muck	moderately rapid	9.37 to 12.05 in	
Lco -- 36 to 60 in	coprogenous earth	slow	4.32 to 5.76 in	7.4 to 8.4

Blue Earth, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: coprogenous earth over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .28
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 50 in	silt loam	moderate	9.00 to 12.00 in	7.4 to 8.4
Cg -- 50 to 60 in	silt loam	moderate	1.77 to 2.36 in	7.4 to 8.4

L330A--Muskego, Blue Earth and Houghton soils, lundlake catena, 0 to 1 percent slopes, ponded

Houghton, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 80 in	muck	moderately rapid	27.97 to 35.96 in	

L331A--Klossner muck, lundlake catena, 0 to 1 percent slopes

Klossner, drained, lundlake catena

Extent: 65 to 85 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material over loamy deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Op,Oa -- 0 to 26 in	muck	moderately rapid	9.09 to 12.47 in	
2A1 -- 26 to 36 in	mucky silty clay loam	moderate	2.17 to 2.56 in	6.1 to 7.4
2A2 -- 36 to 48 in	silty clay loam	moderate	2.20 to 2.69 in	6.1 to 7.4
2Cg -- 48 to 80 in	sandy loam	moderately rapid	3.19 to 4.78 in	7.4 to 7.8

L332A--Blue Earth mucky silt loam, lundlake catena, 0 to 1 percent slopes

Blue Earth, lundlake catena

Extent: 80 to 95 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 0 to 1 percent
Parent material: coprogenous earth over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	mucky silt loam	moderate	1.42 to 1.89 in	7.4 to 8.4
C -- 8 to 60 in	mucky silt loam	moderate	9.35 to 12.47 in	7.4 to 8.4
2Cg -- 60 to 80 in	sandy loam	moderately rapid	2.01 to 3.01 in	7.4 to 7.8

L334A--Houghton and Muskego soils, lundlake catena, 0 to 1 percent slopes

Houghton, surface drained

Extent: 20 to 60 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 6w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 80 in	muck	moderately rapid	27.97 to 35.96 in	

Muskego, surface drained

Extent: 20 to 60 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material over coprogenous earth
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 6w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa1 -- 0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa2 -- 9 to 36 in	muck	moderately rapid	9.37 to 12.05 in	
Lco -- 36 to 60 in	coprogenous earth	slow	4.32 to 5.76 in	7.4 to 8.4

L335A--Klossner soils, lundlake catena, 0 to 1 percent slopes

Klossner, surface drained, lundlake catena

Extent: 50 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material over loamy deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 6w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 26 in	muck	moderately rapid	9.09 to 12.47 in	
2A1 -- 26 to 33 in	silt loam	moderate	1.56 to 1.84 in	6.1 to 7.4
2A2 -- 33 to 40 in	loam	moderate	1.28 to 1.56 in	6.1 to 7.4
2Cg -- 40 to 80 in	sandy loam	moderately rapid	3.98 to 5.96 in	7.4 to 7.8

Klossner, drained, lundlake catena

Extent: 0 to 40 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material over loamy deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Op -- 0 to 10 in	muck	moderately rapid	3.44 to 4.72 in	
Oa -- 10 to 26 in	muck	moderately rapid	5.65 to 7.75 in	
2A1 -- 26 to 36 in	mucky silty clay loam	moderate	2.17 to 2.56 in	6.1 to 7.4
2A2 -- 36 to 48 in	silty clay loam	moderate	2.20 to 2.69 in	6.1 to 7.4
2Cg -- 48 to 80 in	sandy loam	moderately rapid	3.19 to 4.78 in	7.4 to 7.8

L336A--Arctander, overwash-Arctander complex, 1 to 4 percent slopes

Arctander, overwash

Extent: 40 to 60 percent of the unit
Landform(s): drainageways on moraines, swales on moraines
Slope gradient: 1 to 4 percent
Parent material: colluvium over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: C/D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1 -- 0 to 18 in	loam	moderately slow	3.26 to 3.62 in	5.6 to 7.8
A2 -- 18 to 40 in	loam	moderately slow	3.97 to 4.41 in	5.6 to 7.8
Bg -- 40 to 43 in	clay loam	moderate	0.52 to 0.61 in	6.6 to 7.8
2Bkg -- 43 to 56 in	sandy loam	moderately rapid	1.43 to 1.82 in	7.4 to 7.8
2Cg -- 56 to 80 in	fine sandy loam	moderately rapid	2.64 to 4.56 in	7.4 to 8.4

Arctander

Extent: 30 to 55 percent of the unit
Landform(s): drainageways on moraines, swales on moraines
Slope gradient: 1 to 3 percent
Parent material: colluvium over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1,A2 -- 0 to 33 in	loam	moderately slow	6.02 to 6.69 in	5.6 to 7.8
Bg -- 33 to 43 in	clay loam	moderate	1.80 to 2.08 in	6.6 to 7.8
2Bkg -- 43 to 56 in	sandy loam	moderately rapid	1.43 to 1.82 in	7.4 to 7.8
2Cg -- 56 to 80 in	sandy loam	moderately rapid	2.64 to 4.56 in	7.4 to 8.4

L337B--Wadenill-Sunburg complex, 2 to 6 percent slopes

Wadenill

Extent: 55 to 75 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bw -- 10 to 31 in	sandy loam	moderately rapid	2.55 to 4.04 in	5.6 to 7.3
C -- 31 to 60 in	fine sandy loam	moderately rapid	3.16 to 5.46 in	7.4 to 8.4

Sunburg

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.6 to 8.4
Bk -- 8 to 20 in	fine sandy loam	moderately rapid	1.34 to 2.32 in	7.4 to 8.4
C -- 20 to 80 in	fine sandy loam	moderately rapid	6.58 to 9.57 in	7.4 to 8.4

L340B--Wadenill-Sunburg-Hawick complex, 2 to 6 percent slopes

Wadenill

Extent: 40 to 60 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bw -- 10 to 24 in	sandy loam	moderately rapid	1.70 to 2.69 in	5.6 to 7.3
C -- 24 to 60 in	fine sandy loam	moderately rapid	3.94 to 6.81 in	7.4 to 8.4

Sunburg

Extent: 20 to 40 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.6 to 8.4
Bk -- 8 to 20 in	fine sandy loam	moderately rapid	1.34 to 2.32 in	7.4 to 8.4
C -- 20 to 80 in	fine sandy loam	moderately rapid	6.58 to 9.57 in	7.4 to 8.4

L340B--Wadenill-Sunburg-Hawick complex, 2 to 6 percent slopes

Hawick

Extent: 10 to 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	loamy coarse sand	rapid	0.98 to 1.18 in	6.1 to 7.8
Bw -- 10 to 14 in	loamy coarse sand	rapid	0.13 to 0.43 in	6.1 to 7.8
C -- 14 to 60 in	coarse sand	very rapid	0.91 to 2.74 in	7.4 to 8.4

L345A--Seaforth loam, lundlake catena, 1 to 3 percent slopes

Seaforth, lundlake catena

Extent: 60 to 90 percent of the unit
Landform(s): flats on moraines, rises on moraines
Slope gradient: 1 to 3 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	loam	moderately rapid	2.08 to 2.60 in	7.4 to 8.4
Bk1,Bk2 -- 13 to 30 in	sandy loam	moderately rapid	1.69 to 2.54 in	7.4 to 7.8
C -- 30 to 80 in	sandy loam	moderately rapid	5.00 to 7.50 in	7.4 to 8.4

L347A--Klossner and Lundlake soils, 0 to 1 percent slopes, ponded

Klossner, lundlake catena, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material over loamy deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 26 in	muck	moderately rapid	9.09 to 12.47 in	
2A1 -- 26 to 33 in	silt loam	moderate	1.56 to 1.84 in	6.1 to 7.4
2A2 -- 33 to 40 in	loam	moderate	1.28 to 1.56 in	6.1 to 7.4
2Cg -- 40 to 80 in	sandy loam	moderately rapid	3.98 to 5.96 in	7.4 to 7.8

Lundlake, ponded

Extent: 0 to 100 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: colluvium over till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .24
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 26 in	mucky loam	moderate	4.42 to 5.72 in	6.6 to 7.3
Bg -- 26 to 56 in	loam	moderate	5.09 to 6.58 in	6.6 to 7.3
Bk -- 56 to 60 in	sandy loam	moderately rapid	0.39 to 0.59 in	6.6 to 7.8

L350A--Marcellon loam, 0 to 3 percent slopes

Marcellon

Extent: 75 to 95 percent of the unit
Landform(s): rises on moraines
Slope gradient: 0 to 3 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	loam	moderate	2.21 to 3.12 in	5.6 to 7.3
Bt -- 13 to 32 in	loam	moderate	2.27 to 3.40 in	5.6 to 7.3
Bk -- 32 to 80 in	sandy loam	moderately rapid	3.36 to 6.72 in	7.4 to 8.4

L351A--Houghton muck, lundlake catena, 0 to 1 percent slopes

Houghton, drained

Extent: 65 to 85 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oap -- 0 to 10 in	muck	moderately rapid	3.44 to 4.43 in	
Oa -- 10 to 80 in	muck	moderately rapid	24.53 to 31.54 in	

L352A--Muskego muck, lundlake catena, 0 to 1 percent slopes

Muskego, drained, lundlake catena

Extent: 70 to 95 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: organic material over coprogenous earth
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Op -- 0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa -- 9 to 16 in	muck	moderately rapid	2.48 to 3.19 in	
Lco -- 16 to 76 in	coprogenous earth	slow	10.77 to 14.36 in	6.6 to 8.4
2Cg -- 76 to 80 in	sandy loam	moderately rapid	0.39 to 0.59 in	7.4 to 7.8

L353B--Wadenill loam, 2 to 6 percent slopes

Wadenill

Extent: 75 to 95 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	loam	moderate	2.60 to 2.86 in	5.6 to 7.3
Bw -- 13 to 30 in	loam	moderately rapid	2.03 to 3.22 in	5.6 to 7.3
C -- 30 to 60 in	sandy loam	moderately rapid	3.29 to 5.69 in	7.4 to 8.4

L354A--Grovecity loam, 1 to 3 percent slopes

Grovecity

Extent: 70 to 85 percent of the unit
Landform(s): rises on moraines
Slope gradient: 1 to 3 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .20
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 15 in	loam	moderately rapid	2.99 to 3.29 in	6.1 to 7.3
Bw -- 15 to 30 in	sandy loam	moderately rapid	1.80 to 2.84 in	6.1 to 7.8
C -- 30 to 80 in	fine sandy loam	moderately rapid	5.50 to 9.50 in	7.4 to 8.4

L355B--Koronis-Sunburg-Hawick complex, 2 to 6 percent slopes

Koronis

Extent: 40 to 60 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bt -- 8 to 31 in	sandy clay loam	moderately rapid	3.48 to 4.41 in	5.6 to 7.3
Bk -- 31 to 43 in	fine sandy loam	moderately rapid	1.30 to 2.24 in	7.4 to 8.4
C -- 43 to 80 in	fine sandy loam	moderately rapid	4.07 to 5.92 in	7.4 to 8.4

Sunburg

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	sandy loam	moderate	1.97 to 2.17 in	6.6 to 8.4
C -- 10 to 60 in	fine sandy loam	moderately rapid	5.50 to 8.00 in	7.4 to 8.4

L355B--Koronis-Sunburg-Hawick complex, 2 to 6 percent slopes

Hawick

Extent: 10 to 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .10
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw,C -- 7 to 80 in	gravelly coarse sand	very rapid	1.46 to 4.37 in	7.4 to 8.4

L355C2--Koronis-Sunburg-Hawick complex, 6 to 12 percent slopes, moderately eroded

Koronis, moderately eroded

Extent: 35 to 55 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bt --	8 to 31 in	sandy clay loam	moderately rapid	3.48 to 4.41 in	5.6 to 7.3
Bk --	31 to 43 in	fine sandy loam	moderately rapid	1.30 to 2.24 in	7.4 to 8.4
C --	43 to 80 in	fine sandy loam	moderately rapid	4.07 to 5.92 in	7.4 to 8.4

Sunburg, moderately eroded

Extent: 20 to 30 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 10 in	sandy loam	moderate	1.97 to 2.17 in	6.6 to 8.4
C --	10 to 60 in	fine sandy loam	moderately rapid	5.50 to 8.00 in	7.4 to 8.4

L355C2--Koronis-Sunburg-Hawick complex, 6 to 12 percent slopes, moderately eroded

Hawick

Extent: 10 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .10
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 7 in	gravelly sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw,C --	7 to 80 in	gravelly coarse sand	very rapid	1.46 to 4.37 in	7.4 to 8.4

L355D2--Koronis-Sunburg-Hawick complex, 12 to 18 percent slopes, moderately eroded

Koronis, moderately eroded

Extent: 30 to 50 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bt --	8 to 31 in	sandy clay loam	moderately rapid	3.48 to 4.41 in	5.6 to 7.3
Bk --	31 to 43 in	fine sandy loam	moderately rapid	1.30 to 2.24 in	7.4 to 8.4
C --	43 to 80 in	fine sandy loam	moderately rapid	4.07 to 5.92 in	7.4 to 8.4

Sunburg, moderately eroded

Extent: 20 to 40 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 7 in	sandy loam	moderate	1.42 to 1.56 in	6.6 to 8.4
C --	7 to 60 in	fine sandy loam	moderately rapid	5.80 to 8.44 in	7.4 to 8.4

L355D2--Koronis-Sunburg-Hawick complex, 12 to 18 percent slopes, moderately eroded

Hawick

Extent: 10 to 20 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .17
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	gravelly sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw -- 7 to 20 in	gravelly loamy coarse sand	rapid	0.39 to 1.30 in	6.1 to 7.8
Bk -- 20 to 60 in	gravelly coarse sand	very rapid	0.80 to 2.39 in	7.4 to 8.4

L355E--Koronis-Sunburg-Hawick complex, 18 to 40 percent slopes

Koronis

Extent: 30 to 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 5 in	fine sandy loam	moderately rapid	0.67 to 0.92 in	5.6 to 7.3
Bt -- 5 to 21 in	fine sandy loam	moderately rapid	2.36 to 2.99 in	5.6 to 7.3
Bk -- 21 to 60 in	fine sandy loam	moderately rapid	4.29 to 6.24 in	7.4 to 8.4

Sunburg

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	fine sandy loam	moderate	1.42 to 1.56 in	6.6 to 8.4
C -- 7 to 60 in	fine sandy loam	moderately rapid	5.80 to 8.44 in	7.4 to 8.4

L355E--Koronis-Sunburg-Hawick complex, 18 to 40 percent slopes

Hawick

Extent: 10 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 18 to 40 percent
Parent material: outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 14 in	gravelly loamy sand	rapid	0.43 to 1.84 in	6.1 to 7.8
Bk -- 14 to 60 in	gravelly coarse sand	rapid	1.37 to 4.57 in	6.1 to 7.8

L356C2--Sunburg-Wadenill complex, 6 to 12 percent slopes, moderately eroded

Sunburg, moderately eroded

Extent: 50 to 70 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.6 to 8.4
Bk -- 8 to 20 in	fine sandy loam	moderately rapid	1.34 to 2.32 in	7.4 to 8.4
C -- 20 to 80 in	fine sandy loam	moderately rapid	6.58 to 9.57 in	7.4 to 8.4

Wadenill, moderately eroded

Extent: 20 to 40 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	fine sandy loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bw -- 10 to 31 in	fine sandy loam	moderately rapid	2.55 to 4.04 in	5.6 to 7.3
C -- 31 to 80 in	fine sandy loam	moderately rapid	5.37 to 9.28 in	7.4 to 8.4

L356D2--Sunburg-Wadenill complex, 12 to 18 percent slopes, moderately eroded

Sunburg, moderately eroded

Extent: 60 to 80 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.6 to 8.4
Bk -- 8 to 20 in	fine sandy loam	moderately rapid	1.34 to 2.32 in	7.4 to 8.4
C -- 20 to 80 in	fine sandy loam	moderately rapid	6.58 to 9.57 in	7.4 to 8.4

Wadenill, moderately eroded

Extent: 15 to 30 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	fine sandy loam	moderately rapid	1.57 to 1.77 in	5.6 to 7.3
Bw -- 10 to 31 in	fine sandy loam	moderately rapid	2.55 to 4.04 in	5.6 to 7.3
C -- 31 to 80 in	fine sandy loam	moderately rapid	5.37 to 9.28 in	7.4 to 8.4

L357B--Koronis-Sunburg complex, 2 to 6 percent slopes

Koronis

Extent: 50 to 80 percent of the unit
Landform(s): hills on moraines
Slope gradient: 2 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bt -- 8 to 31 in	sandy clay loam	moderately rapid	3.48 to 4.41 in	5.6 to 7.3
Bk -- 31 to 43 in	fine sandy loam	moderately rapid	1.30 to 2.24 in	7.4 to 8.4
C -- 43 to 80 in	fine sandy loam	moderately rapid	4.07 to 5.92 in	7.4 to 8.4

Sunburg

Extent: 15 to 25 percent of the unit
Landform(s): hills on moraines
Slope gradient: 4 to 6 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.6 to 8.4
Bk -- 8 to 20 in	fine sandy loam	moderately rapid	1.34 to 2.32 in	7.4 to 8.4
C -- 20 to 80 in	fine sandy loam	moderately rapid	6.58 to 9.57 in	7.4 to 8.4

L357C2--Koronis-Sunburg complex, 6 to 12 percent slopes, moderately eroded

Koronis, moderately eroded

Extent: 50 to 75 percent of the unit
Landform(s): hills on moraines
Slope gradient: 6 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bt -- 8 to 31 in	sandy clay loam	moderately rapid	3.48 to 4.41 in	5.6 to 7.3
Bk -- 31 to 43 in	fine sandy loam	moderately rapid	1.30 to 2.24 in	7.4 to 8.4
C -- 43 to 80 in	fine sandy loam	moderately rapid	4.07 to 5.92 in	7.4 to 8.4

Sunburg, moderately eroded

Extent: 15 to 30 percent of the unit
Landform(s): hills on moraines
Slope gradient: 8 to 12 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.6 to 8.4
Bk -- 8 to 20 in	fine sandy loam	moderately rapid	1.34 to 2.32 in	7.4 to 8.4
C -- 20 to 80 in	fine sandy loam	moderately rapid	6.58 to 9.57 in	7.4 to 8.4

L357D2--Koronis-Sunburg complex, 12 to 18 percent slopes, moderately eroded

Koronis, moderately eroded

Extent: 55 to 75 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
Bt -- 8 to 31 in	sandy clay loam	moderately rapid	3.48 to 4.41 in	5.6 to 7.3
Bk -- 31 to 43 in	fine sandy loam	moderately rapid	1.30 to 2.24 in	7.4 to 8.4
C -- 43 to 80 in	fine sandy loam	moderately rapid	4.07 to 5.92 in	7.4 to 8.4

Sunburg, moderately eroded

Extent: 15 to 35 percent of the unit
Landform(s): hills on moraines
Slope gradient: 12 to 18 percent
Parent material: till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.6 to 8.4
Bk -- 8 to 20 in	fine sandy loam	moderately rapid	1.34 to 2.32 in	7.4 to 8.4
C -- 20 to 80 in	fine sandy loam	moderately rapid	6.58 to 9.57 in	7.4 to 8.4

Map Unit Description (MN)

Meeker County, Minnesota

W--Water

Water

Extent: 100 percent of the unit

Landform(s):

Slope gradient:

Parent material:

Restrictive feature(s): greater than 60 inches

Flooding:

Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil: unranked

Hydrologic group:

Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

This report provides a semitabular listing of some soil and site properties and interpretations that are valuable in communicating the concept of a map unit. The report also provides easy access to the commonly used conservation planning information in one place. The major soil components in each map unit are displayed. Minor components may be displayed if they are included in the database and are selected at the time the report is generated.