

## Map Unit Description (MN)

Lake 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]

### 21A--Hermantown loam

#### Hermantown

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 30 to 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .32

*Land capability, nonirrigated:* 3w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.79 to 0.98 in	5.1 to 6.0
E,Bw1 -- 4 to 14 in	fine sandy loam	moderate	1.54 to 2.05 in	5.1 to 6.0
Bw2,Bw3 -- 14 to 31 in	sandy loam	moderate	2.03 to 3.05 in	5.1 to 6.5
2Bw4 -- 31 to 53 in	sandy loam	slow	2.20 to 3.09 in	5.1 to 6.5
2Cd -- 53 to 80 in	sandy loam	impermeable	0.27 to 1.87 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 21B--Ahmeek loam, 2 to 6 percent slopes

#### Ahmeek

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 26 to 55 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 2e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	loam	moderate	0.35 to 0.43 in	4.5 to 6.0
E,Bw1,Bw2 -- 2 to 14 in	fine sandy loam	moderate	1.83 to 2.44 in	4.5 to 6.0
2Bw3,2Bw4 -- 14 to 33 in	fine sandy loam	moderately slow	2.27 to 3.21 in	5.1 to 6.5
2Cd -- 33 to 60 in	fine sandy loam	impermeable	1.34 to 2.68 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 21BC--Ahmeek loam, 2 to 12 percent slopes

#### Ahmeek

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 12 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 26 to 55 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	loam	moderate	0.35 to 0.43 in	4.5 to 6.0
E,Bw1,Bw2 -- 2 to 14 in	fine sandy loam	moderate	1.83 to 2.44 in	4.5 to 6.0
2Bw3,2Bw4 -- 14 to 33 in	fine sandy loam	moderately slow	2.27 to 3.21 in	5.1 to 6.5
2Cd -- 33 to 60 in	fine sandy loam	impermeable	1.34 to 2.68 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 21C--Ahmeek loam, 6 to 12 percent slopes

#### Ahmeek

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 26 to 55 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	loam	moderate	0.35 to 0.43 in	4.5 to 6.0
E,Bw1,Bw2 -- 2 to 14 in	fine sandy loam	moderate	1.83 to 2.44 in	4.5 to 6.0
2Bw3,2Bw4 -- 14 to 33 in	fine sandy loam	moderately slow	2.27 to 3.21 in	5.1 to 6.5
2Cd -- 33 to 60 in	fine sandy loam	impermeable	1.34 to 2.68 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 21D--Ahmeek loam, 12 to 18 percent slopes

#### Ahmeek

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 26 to 55 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 4e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	loam	moderate	0.35 to 0.43 in	4.5 to 6.0
E,2Bw1,2Bw2 - 2 to 14 in	fine sandy loam	moderate	1.83 to 2.44 in	4.5 to 6.0
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2Bw3,2Bw4 -- 14 to 33 in	fine sandy loam	moderately slow	2.27 to 3.21 in	5.1 to 6.5
2Cd -- 33 to 60 in	fine sandy loam	impermeable	1.34 to 2.68 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 21DE--Ahmeek loam, 12 to 25 percent slopes

#### Ahmeek

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 25 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 26 to 55 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	loam	moderate	0.35 to 0.43 in	4.5 to 6.0
E,Bw1,Bw2 -- 2 to 14 in	fine sandy loam	moderate	1.83 to 2.44 in	4.5 to 6.0
2Bw3,2Bw4 -- 14 to 33 in	fine sandy loam	moderately slow	2.27 to 3.21 in	5.1 to 6.5
2Cd -- 33 to 60 in	fine sandy loam	impermeable	1.34 to 2.68 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 21E--Ahmeek loam, 18 to 25 percent slopes

#### Ahmeek

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 18 to 25 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 26 to 55 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	loam	moderate	0.35 to 0.43 in	4.5 to 6.0
E,Bw1,Bw2 -- 2 to 14 in	fine sandy loam	moderate	1.83 to 2.44 in	4.5 to 6.0
2Bw3,2Bw4 -- 14 to 33 in	fine sandy loam	moderately slow	2.27 to 3.21 in	5.1 to 6.5
2Cd -- 33 to 60 in	fine sandy loam	impermeable	1.34 to 2.68 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 21F--Ahmeek loam, 25 to 40 percent slopes

#### Ahmeek

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 25 to 40 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 26 to 55 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	loam	moderate	0.35 to 0.43 in	4.5 to 6.0
E,Bw1,Bw2 -- 2 to 14 in	fine sandy loam	moderate	1.83 to 2.44 in	4.5 to 6.0
2Bw3,2Bw4 -- 14 to 33 in	fine sandy loam	moderately slow	2.27 to 3.21 in	5.1 to 6.5
2Cd -- 33 to 60 in	fine sandy loam	impermeable	1.34 to 2.68 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 22--Allendale loamy sand

#### Allendale

*Extent:* 85 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 0 to 1 percent

*Parent material:* loamy till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 3w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	loamy sand	rapid	0.28 to 0.38 in	4.5 to 7.3
E, Bhs, Bs, E' -- 3 to 28 in	sand	rapid	1.49 to 2.48 in	4.5 to 7.3
2Bt, 2C -- 28 to 60 in	silty clay	impermeable	2.55 to 3.83 in	6.1 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 166--Ronneby loam

#### Ronneby

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 39 to 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.71 to 0.91 in	5.1 to 6.5
E -- 4 to 12 in	fine sandy loam	moderately rapid	0.94 to 1.50 in	5.1 to 6.5
B/E,Bt -- 12 to 33 in	fine sandy loam	moderate	2.55 to 4.04 in	5.6 to 6.5
BC -- 33 to 45 in	fine sandy loam	slow	0.35 to 0.94 in	5.6 to 7.3
Cd -- 45 to 60 in	fine sandy loam	impermeable	0.00 to 0.60 in	5.6 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 186--Nemadji loamy fine sand

#### Nemadji

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 0 to 1 percent

*Parent material:* sandy outwash

*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):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 3w

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	loamy fine sand	rapid	0.51 to 0.72 in	4.5 to 5.5
Bhir -- 5 to 33 in	fine sand	rapid	1.40 to 3.07 in	4.5 to 6.0
C -- 33 to 60 in	fine sand	rapid	1.34 to 1.87 in	4.5 to 6.0

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 254B--Hibbing loam, 2 to 6 percent slopes

#### Hibbing

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* clayey till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*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:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.71 to 0.87 in	3.5 to 6.0
Bw,2E/B,2Bt -- 4 to 34 in	clay	slow	2.99 to 4.79 in	5.1 to 7.8
2BCd,2Cd -- 34 to 60 in	clay	slow	2.34 to 3.90 in	7.4 to 8.4

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 254BC--Hibbing loam, 2 to 12 percent slopes

#### Hibbing

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 12 percent

*Parent material:* clayey till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.71 to 0.87 in	3.5 to 6.0
Bw,2E/B,2Bt -- 4 to 34 in	clay	slow	2.99 to 4.79 in	5.1 to 7.8
2BCd,2Cd -- 34 to 60 in	clay	slow	2.34 to 3.90 in	7.4 to 8.4

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 254C--Hibbing loam, 6 to 12 percent slopes

#### Hibbing

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* clayey till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.71 to 0.87 in	3.5 to 6.0
Bw,2E/B,2Bt -- 4 to 34 in	clay	slow	2.99 to 4.79 in	5.1 to 7.8
2BCd,2Cd -- 34 to 60 in	clay	slow	2.34 to 3.90 in	7.4 to 8.4

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 254D--Hibbing loam, 12 to 18 percent slopes

#### Hibbing

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* clayey till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 4e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.71 to 0.87 in	3.5 to 6.0
Bw,2E/B,2Bt -- 4 to 34 in	clay	slow	2.99 to 4.79 in	5.1 to 7.8
2BCd,2Cd -- 34 to 60 in	clay	slow	2.34 to 3.90 in	7.4 to 8.4

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 254DE--Hibbing loam, 12 to 25 percent slopes

#### Hibbing

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 25 percent

*Parent material:* clayey till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.71 to 0.87 in	3.5 to 6.0
Bw,2E/B,2Bt -- 4 to 34 in	clay	slow	2.99 to 4.79 in	5.1 to 7.8
2BCd,2Cd -- 34 to 60 in	clay	slow	2.34 to 3.90 in	7.4 to 8.4

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 254E--Hibbing loam, 18 to 25 percent slopes

#### Hibbing

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 18 to 25 percent

*Parent material:* clayey till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.71 to 0.87 in	3.5 to 6.0
Bw,2E/B,2Bt -- 4 to 34 in	clay	slow	2.99 to 4.79 in	5.1 to 7.8
2BCd,2Cd -- 34 to 60 in	clay	slow	2.34 to 3.90 in	7.4 to 8.4

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 254F--Hibbing loam, 25 to 40 percent slopes

#### Hibbing

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 25 to 40 percent

*Parent material:* clayey till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.71 to 0.87 in	3.5 to 6.0
Bw,2E/B,2Bt -- 4 to 34 in	clay	slow	2.99 to 4.79 in	5.1 to 7.8
2BCd,2Cd -- 34 to 60 in	clay	slow	2.34 to 3.90 in	7.4 to 8.4

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 274--Newson loamy sand

#### Newson

*Extent:* 85 percent of the unit

*Landform(s):* depressions on outwash plains

*Slope gradient:* 0 to 1 percent

*Parent material:* 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):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 6w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	loamy sand	rapid	0.57 to 0.92 in	3.5 to 7.3
Bg,BCg -- 7 to 23 in	loamy sand	rapid	0.79 to 1.73 in	3.5 to 5.5
C -- 23 to 60 in	sand	rapid	1.48 to 4.07 in	4.5 to 6.5

## Map Unit Description (MN)

Lake County, Minnesota

### 303A--Ontonagon silty clay, 0 to 2 percent slopes

#### Ontonagon

*Extent:* 85 percent of the unit

*Landform(s):* 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:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3s

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 303B--Ontonagon silty clay, 2 to 6 percent slopes

#### Ontonagon

*Extent:* 85 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 2 to 6 percent

*Parent material:* clayey lacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 303BC--Ontonagon silty clay, 2 to 12 percent slopes

#### Ontonagon

*Extent:* 85 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 2 to 12 percent

*Parent material:* clayey lacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 303C--Ontonagon silty clay, 6 to 12 percent slopes

#### Ontonagon

*Extent:* 85 percent of the unit

*Landform(s):* 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:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 303D--Ontonagon silty clay, 12 to 18 percent slopes

#### Ontonagon

*Extent:* 85 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 12 to 18 percent

*Parent material:* clayey lacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 4e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 303DE--Ontonagon silty clay, 12 to 25 percent slopes

#### Ontonagon

*Extent:* 85 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 12 to 25 percent

*Parent material:* clayey lacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 303E--Ontonagon silty clay, 18 to 25 percent slopes

#### Ontonagon

*Extent:* 85 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 18 to 25 percent

*Parent material:* clayey lacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 303F--Ontonagon silty clay, 25 to 40 percent slopes

#### Ontonagon

*Extent:* 85 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 25 to 40 percent

*Parent material:* clayey lacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 305--Bergland clay

#### Bergland

*Extent:* 85 percent of the unit

*Landform(s):* depressions on lake plains

*Slope gradient:* 0 to 1 percent

*Parent material:* clayey lacustrine deposits

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* frequent

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 5w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	clay	slow	0.38 to 0.44 in	5.1 to 7.8
Eg,Bg,Bw -- 3 to 25 in	clay	impermeable	1.98 to 2.87 in	5.1 to 7.8
C -- 25 to 60 in	clay	impermeable	2.77 to 4.16 in	7.4 to 8.4

## Map Unit Description (MN)

Lake County, Minnesota

### 355A--Cloquet fine sandy loam, 0 to 2 percent slopes

#### Cloquet

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* loamy drift 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):* 3

*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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	fine sandy loam	moderately rapid	0.31 to 0.43 in	4.5 to 6.0
E,Bw -- 2 to 14 in	sandy loam	moderate	1.46 to 2.20 in	4.5 to 6.0
2Bw,2BC -- 14 to 36 in	gravelly loamy coarse sand	very rapid	0.43 to 0.87 in	5.6 to 6.5
2C -- 36 to 60 in	stratified very gravelly coarse sand to sand	very rapid	0.48 to 0.96 in	5.6 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 355B--Cloquet fine sandy loam, 2 to 6 percent slopes

#### Cloquet

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy drift 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):* 3

*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:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	fine sandy loam	moderately rapid	0.31 to 0.43 in	4.5 to 6.0
E,Bw -- 2 to 14 in	sandy loam	moderate	1.46 to 2.20 in	4.5 to 6.0
2Bw,2BC -- 14 to 36 in	gravelly loamy coarse sand	very rapid	0.43 to 0.87 in	5.6 to 6.5
2C -- 36 to 60 in	stratified very gravelly coarse sand to sand	very rapid	0.48 to 0.96 in	5.6 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 355BC--Cloquet fine sandy loam, 2 to 12 percent slopes

#### Cloquet

<p><i>Extent:</i> 85 percent of the unit</p> <p><i>Landform(s):</i> outwash plains</p> <p><i>Slope gradient:</i> 2 to 12 percent</p> <p><i>Parent material:</i> loamy drift over sandy and gravelly outwash</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> somewhat excessively drained</p>	<p><i>Soil loss tolerance (T factor):</i> 3</p> <p><i>Wind erodibility group (WEG):</i> 3</p> <p><i>Wind erodibility index (WEI):</i> 86</p> <p><i>Kw factor (surface layer)</i> .24</p> <p><i>Land capability, nonirrigated:</i> 4e</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> A</p> <p><i>Potential for frost action:</i> low</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	fine sandy loam	moderately rapid	0.31 to 0.43 in	4.5 to 6.0
E,Bw -- 2 to 14 in	sandy loam	moderate	1.46 to 2.20 in	4.5 to 6.0
2Bw,2BC -- 14 to 36 in	gravelly loamy coarse sand	very rapid	0.43 to 0.87 in	5.6 to 6.5
2C -- 36 to 60 in	stratified very gravelly coarse sand to sand	very rapid	0.48 to 0.96 in	5.6 to 6.5

#### Newson

<p><i>Extent:</i> 5 percent of the unit</p> <p><i>Landform(s):</i> depressions</p> <p><i>Slope gradient:</i></p> <p><i>Parent material:</i></p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i></p>	<p><i>Soil loss tolerance (T factor):</i></p> <p><i>Wind erodibility group (WEG):</i></p> <p><i>Wind erodibility index (WEI):</i></p> <p><i>Kw factor (surface layer)</i></p> <p><i>Land capability, nonirrigated:</i></p> <p><i>Hydric soil:</i> yes</p> <p><i>Hydrologic group:</i></p> <p><i>Potential for frost action:</i></p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 355C--Cloquet fine sandy loam, 6 to 12 percent slopes

#### Cloquet

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 6 to 12 percent

*Parent material:* loamy drift 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):* 3

*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:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	fine sandy loam	moderately rapid	0.31 to 0.43 in	4.5 to 6.0
E,Bw -- 2 to 14 in	sandy loam	moderate	1.46 to 2.20 in	4.5 to 6.0
2bw,2BC -- 14 to 36 in	gravelly loamy coarse sand	very rapid	0.43 to 0.87 in	5.6 to 6.5
2C -- 36 to 60 in	stratified very gravelly coarse sand to sand	very rapid	0.48 to 0.96 in	5.6 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 355D--Cloquet fine sandy loam, 12 to 18 percent slopes

#### Cloquet

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 12 to 18 percent

*Parent material:* loamy drift 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):* 3

*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:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	fine sandy loam	moderately rapid	0.31 to 0.43 in	4.5 to 6.0
E,Bw -- 2 to 14 in	sandy loam	moderate	1.46 to 2.20 in	4.5 to 6.0
2Bw,2BC -- 14 to 36 in	gravelly loamy coarse sand	very rapid	0.43 to 0.87 in	5.6 to 6.5
2C -- 36 to 60 in	stratified very gravelly coarse sand to sand	very rapid	0.48 to 0.96 in	5.6 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 355DE--Cloquet fine sandy loam, 12 to 25 percent slopes

#### Cloquet

<p><i>Extent:</i> 85 percent of the unit</p> <p><i>Landform(s):</i> outwash plains</p> <p><i>Slope gradient:</i> 12 to 25 percent</p> <p><i>Parent material:</i> loamy drift over sandy and gravelly outwash</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> somewhat excessively drained</p>	<p><i>Soil loss tolerance (T factor):</i> 3</p> <p><i>Wind erodibility group (WEG):</i> 3</p> <p><i>Wind erodibility index (WEI):</i> 86</p> <p><i>Kw factor (surface layer)</i> .24</p> <p><i>Land capability, nonirrigated:</i> 7e</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> A</p> <p><i>Potential for frost action:</i> low</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	fine sandy loam	moderately rapid	0.31 to 0.43 in	4.5 to 6.0
E,Bw -- 2 to 14 in	sandy loam	moderate	1.46 to 2.20 in	4.5 to 6.0
2Bw,2BC -- 14 to 36 in	gravelly loamy coarse sand	very rapid	0.43 to 0.87 in	5.6 to 6.5
2C -- 36 to 60 in	stratified very gravelly coarse sand to sand	very rapid	0.48 to 0.96 in	5.6 to 6.5

#### Newson

<p><i>Extent:</i> 5 percent of the unit</p> <p><i>Landform(s):</i> depressions</p> <p><i>Slope gradient:</i></p> <p><i>Parent material:</i></p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i></p>	<p><i>Soil loss tolerance (T factor):</i></p> <p><i>Wind erodibility group (WEG):</i></p> <p><i>Wind erodibility index (WEI):</i></p> <p><i>Kw factor (surface layer)</i></p> <p><i>Land capability, nonirrigated:</i></p> <p><i>Hydric soil:</i> yes</p> <p><i>Hydrologic group:</i></p> <p><i>Potential for frost action:</i></p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 355E--Cloquet fine sandy loam, 18 to 25 percent slopes

#### Cloquet

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 18 to 25 percent

*Parent material:* loamy drift 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):* 3

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	fine sandy loam	moderately rapid	0.31 to 0.43 in	4.5 to 6.0
E,Bw -- 2 to 14 in	sandy loam	moderate	1.46 to 2.20 in	4.5 to 6.0
2Bw,2BC -- 14 to 36 in	gravelly loamy coarse sand	very rapid	0.43 to 0.87 in	5.6 to 6.5
2C -- 36 to 60 in	stratified very gravelly coarse sand to sand	very rapid	0.48 to 0.96 in	5.6 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 355F--Cloquet fine sandy loam, 25 to 40 percent slopes

#### Cloquet

<p><i>Extent:</i> 85 percent of the unit</p> <p><i>Landform(s):</i> outwash plains</p> <p><i>Slope gradient:</i> 25 to 40 percent</p> <p><i>Parent material:</i> loamy drift over sandy and gravelly outwash</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> somewhat excessively drained</p>	<p><i>Soil loss tolerance (T factor):</i> 3</p> <p><i>Wind erodibility group (WEG):</i> 3</p> <p><i>Wind erodibility index (WEI):</i> 86</p> <p><i>Kw factor (surface layer)</i> .24</p> <p><i>Land capability, nonirrigated:</i> 7e</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> A</p> <p><i>Potential for frost action:</i> low</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 2 in	fine sandy loam	moderately rapid	0.31 to 0.43 in	4.5 to 6.0
E,Bw -- 2 to 14 in	sandy loam	moderate	1.46 to 2.20 in	4.5 to 6.0
2Bw,2BC -- 14 to 36 in	gravelly loamy coarse sand	very rapid	0.43 to 0.87 in	5.6 to 6.5
2C -- 36 to 60 in	stratified very gravelly coarse sand to sand	very rapid	0.48 to 0.96 in	5.6 to 6.5

#### Newson

<p><i>Extent:</i> 5 percent of the unit</p> <p><i>Landform(s):</i> depressions</p> <p><i>Slope gradient:</i></p> <p><i>Parent material:</i></p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i></p>	<p><i>Soil loss tolerance (T factor):</i></p> <p><i>Wind erodibility group (WEG):</i></p> <p><i>Wind erodibility index (WEI):</i></p> <p><i>Kw factor (surface layer)</i></p> <p><i>Land capability, nonirrigated:</i></p> <p><i>Hydric soil:</i> yes</p> <p><i>Hydrologic group:</i></p> <p><i>Potential for frost action:</i></p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 407--Brimson loam, rubbly

#### Brimson, rubbly

*Extent:* 85 percent of the unit

*Landform(s):* drumlins

*Slope gradient:* 0 to 4 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 20 to 50 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 6s

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	stony loam	moderate	0.26 to 0.97 in	5.1 to 6.5
Bw1 -- 5 to 11 in	stony sandy loam	moderate	0.24 to 0.94 in	5.1 to 6.5
Bw2,Bw3,Bw4 - 11 to 35 in	sandy loam	moderate	2.40 to 4.56 in	5.1 to 6.5
-				
2Cd -- 35 to 80 in	gravelly sandy loam	impermeable	0.90 to 4.49 in	5.6 to 7.3

#### Bugcreek

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 420--Twig muck

#### Twig

*Extent:* 85 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* organic material over loamy till

*Restrictive feature(s):* densic material at 39 to 60 inches

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated:* 7w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 12 in	muck	moderately rapid	4.13 to 6.50 in	
A -- 12 to 20 in	silt loam	moderately slow	1.65 to 1.82 in	3.5 to 5.5
Eg -- 20 to 26 in	loam	impermeable	0.41 to 0.59 in	3.5 to 5.5
2Btg,2Bt -- 26 to 48 in	fine sandy loam	moderately slow	2.43 to 3.53 in	3.5 to 5.5
2BCd -- 48 to 72 in	fine sandy loam	impermeable	0.00 to 0.96 in	3.5 to 6.0

## Map Unit Description (MN)

Lake County, Minnesota

### 454AC--Mahtomedi loamy sand, 0 to 12 percent slopes

#### Mahtomedi

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 0 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)* .15

*Land capability, nonirrigated:* 4s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	loamy sand	rapid	0.51 to 0.61 in	5.1 to 6.5
E -- 5 to 8 in	sand	rapid	0.17 to 0.22 in	5.1 to 6.5
Bw -- 8 to 30 in	gravelly sand	rapid	1.10 to 1.54 in	5.1 to 6.5
C -- 30 to 60 in	gravelly sand	rapid	1.20 to 2.69 in	5.1 to 7.8

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 454DE--Mahtomedi loamy sand, 12 to 25 percent slopes

#### Mahtomedi

*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):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 6s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	loamy sand	rapid	0.51 to 0.61 in	5.1 to 6.5
E -- 5 to 8 in	sand	rapid	0.17 to 0.22 in	5.1 to 6.5
Bw -- 8 to 30 in	gravelly sand	rapid	1.10 to 1.54 in	5.1 to 6.5
C -- 30 to 60 in	gravelly sand	rapid	1.20 to 2.69 in	5.1 to 7.8

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 454F--Mahtomedi loamy sand, 25 to 40 percent slopes

#### Mahtomedi

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 25 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)* .15

*Land capability, nonirrigated:* 7s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	loamy sand	rapid	0.51 to 0.61 in	5.1 to 6.5
E -- 5 to 8 in	sand	rapid	0.17 to 0.22 in	5.1 to 6.5
Bw -- 8 to 30 in	gravelly sand	rapid	1.10 to 1.54 in	5.1 to 6.5
C -- 30 to 60 in	gravelly sand	rapid	1.20 to 2.69 in	5.1 to 7.8

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 502--Dusler silt loam

#### Dusler

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* loamy till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 2w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	silt loam	moderate	0.79 to 0.94 in	4.5 to 6.0
E,E/B -- 4 to 22 in	silt loam	moderate	2.90 to 3.98 in	4.5 to 6.0
Bt -- 22 to 55 in	clay loam	moderately slow	4.96 to 6.28 in	5.1 to 7.3
C -- 55 to 80 in	loam	slow	2.48 to 3.72 in	6.6 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 504A--Dusler very fine sandy loam, 0 to 2 percent slopes

#### Dusler

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* loamy till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 2w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	very fine sandy loam	moderate	0.63 to 0.87 in	4.5 to 6.0
E,E/B -- 4 to 22 in	silt loam	moderate	2.90 to 3.98 in	4.5 to 6.0
Bt -- 22 to 55 in	clay loam	moderately slow	4.96 to 6.28 in	5.1 to 7.3
C -- 55 to 60 in	loam	slow	0.47 to 0.71 in	6.6 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 504B--Duluth very fine sandy loam, 1 to 6 percent slopes

#### Duluth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 1 to 6 percent

*Parent material:* loamy till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 2e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	very fine sandy loam	moderate	0.63 to 0.87 in	4.5 to 6.0
E,Bw -- 4 to 12 in	silt loam	moderate	1.26 to 1.73 in	4.5 to 6.0
2B/E,2Bt -- 12 to 56 in	clay loam	moderately slow	6.61 to 8.38 in	4.5 to 6.5
2C -- 56 to 60 in	loam	moderately slow	0.55 to 0.75 in	6.1 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 504BC--Duluth very fine sandy loam, 2 to 12 percent slopes

#### Duluth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 12 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):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	very fine sandy loam	moderate	0.63 to 0.87 in	4.5 to 6.0
E,Bw -- 4 to 12 in	silt loam	moderate	1.26 to 1.73 in	4.5 to 6.0
2B/E,2Bt -- 12 to 49 in	clay loam	moderately slow	5.55 to 7.03 in	4.5 to 6.5
2C -- 49 to 60 in	loam	moderately slow	1.54 to 2.09 in	6.1 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 504C--Duluth very fine sandy loam, 6 to 12 percent slopes

#### Duluth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 6 to 12 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):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	very fine sandy loam	moderate	0.63 to 0.87 in	4.5 to 6.0
E,Bw -- 4 to 12 in	silt loam	moderate	1.26 to 1.73 in	4.5 to 6.0
2B/E,2Bt -- 12 to 49 in	clay loam	moderately slow	5.55 to 7.03 in	4.5 to 6.5
2C -- 49 to 60 in	loam	moderately slow	1.54 to 2.09 in	6.1 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 504D--Duluth very fine sandy loam, 12 to 18 percent slopes

#### Duluth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 18 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):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	very fine sandy loam	moderate	0.63 to 0.87 in	4.5 to 6.0
E,Bw -- 4 to 12 in	silt loam	moderate	1.26 to 1.73 in	4.5 to 6.0
2B/E,2Bt -- 12 to 49 in	clay loam	moderately slow	5.55 to 7.03 in	4.5 to 6.5
2C -- 49 to 60 in	loam	moderately slow	1.54 to 2.09 in	6.1 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 504DE--Duluth very fine sandy loam, 12 to 25 percent slopes

#### Duluth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 25 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):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	very fine sandy loam	moderate	0.63 to 0.87 in	4.5 to 6.0
E,Bw -- 4 to 12 in	silt loam	moderate	1.26 to 1.73 in	4.5 to 6.0
2B/E,2Bt -- 12 to 49 in	clay loam	moderately slow	5.55 to 7.03 in	4.5 to 6.5
2C -- 49 to 60 in	loam	moderately slow	1.54 to 2.09 in	6.1 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 504E--Duluth very fine sandy loam, 18 to 25 percent slopes

#### Duluth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 18 to 25 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):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	very fine sandy loam	moderate	0.63 to 0.87 in	4.5 to 6.0
E,Bw -- 4 to 12 in	silt loam	moderate	1.26 to 1.73 in	4.5 to 6.0
2B/E,2Bt -- 12 to 49 in	clay loam	moderately slow	5.55 to 7.03 in	4.5 to 6.5
2C -- 49 to 60 in	loam	moderately slow	1.54 to 2.09 in	6.1 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 504F--Duluth very fine sandy loam, 25 to 35 percent slopes

#### Duluth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 25 to 35 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):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	very fine sandy loam	moderate	0.63 to 0.87 in	4.5 to 6.0
E,Bw -- 4 to 12 in	silt loam	moderate	1.26 to 1.73 in	4.5 to 6.0
2B/E,2Bt -- 12 to 49 in	clay loam	moderately slow	5.55 to 7.03 in	4.5 to 6.5
2C -- 49 to 60 in	loam	moderately slow	1.54 to 2.09 in	6.1 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 512A--Amasa fine sandy loam, 0 to 2 percent slopes

#### Amasa

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* loamy drift over sandy and gravelly outwash

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 3

*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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	fine sandy loam	moderate	0.47 to 0.57 in	3.6 to 6.0
Bhs,Bs -- 3 to 27 in	silt loam	moderate	3.31 to 5.20 in	3.6 to 6.0
2C -- 27 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.66 to 1.32 in	3.6 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 512B--Amasa fine sandy loam, 2 to 6 percent slopes

#### Amasa

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy drift over sandy and gravelly outwash

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	fine sandy loam	moderate	0.47 to 0.57 in	3.6 to 6.0
Bhs,Bs -- 3 to 27 in	silt loam	moderate	3.31 to 5.20 in	3.6 to 6.0
2C -- 27 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.66 to 1.32 in	3.6 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 512C--Amasa fine sandy loam, 6 to 12 percent slopes

#### Amasa

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 6 to 12 percent

*Parent material:* loamy drift over sandy and gravelly outwash

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	fine sandy loam	moderate	0.47 to 0.57 in	3.6 to 6.0
Bhs,Bs -- 3 to 27 in	silt loam	moderate	3.31 to 5.20 in	3.6 to 6.0
2C -- 27 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.66 to 1.32 in	3.6 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 515A--Newfound gravelly sandy loam, 0 to 2 percent slopes

#### Newfound

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* gravelly and/or loamy till

*Restrictive feature(s):* densic material at 14 to 28 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 4s

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E --	0 to 5 in gravelly sandy loam	moderately rapid	0.51 to 0.72 in	4.5 to 6.0
Bhir,Bx,Cx --	5 to 60 in gravelly sandy loam	impermeable	0.00 to 2.19 in	4.5 to 6.0

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

---

### 515A--Newfound gravelly sandy loam, 0 to 2 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 515B--Newfound gravelly sandy loam, 2 to 6 percent slopes

#### Newfound

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* gravelly and/or loamy till

*Restrictive feature(s):* densic material at 14 to 28 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 4s

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 5 in	gravelly sandy loam	moderately rapid	0.51 to 0.72 in	4.5 to 6.0
Bhir,Bx,Cx -- 5 to 60 in	gravelly sandy loam	impermeable	0.00 to 2.19 in	4.5 to 6.0

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

---

### 515B--Newfound gravelly sandy loam, 2 to 6 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 515BC--Newfound gravelly sandy loam, 2 to 12 percent slopes

#### Newfound

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 12 percent

*Parent material:* gravelly and/or loamy till

*Restrictive feature(s):* densic material at 14 to 28 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 4s

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 1 in	gravelly sandy loam	moderately rapid	0.12 to 0.17 in	4.5 to 6.0
Bhir,Bx,Cx -- 5 to 60 in	gravelly sandy loam	impermeable	0.00 to 2.19 in	4.5 to 6.0

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

---

### 515BC--Newfound gravelly sandy loam, 2 to 12 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 515C--Newfound gravelly sandy loam, 6 to 12 percent slopes

#### Newfound

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* gravelly and/or loamy till

*Restrictive feature(s):* densic material at 14 to 28 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 4s

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E --	0 to 5 in gravelly sandy loam	moderately rapid	0.51 to 0.72 in	4.5 to 6.0
Bhir,Bx,Cx --	5 to 60 in gravelly sandy loam	impermeable	0.00 to 2.19 in	4.5 to 6.0

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

---

### 515C--Newfound gravelly sandy loam, 6 to 12 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 515D--Newfound gravelly sandy loam, 12 to 20 percent slopes

#### Newfound

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 20 percent

*Parent material:* gravelly and/or loamy till

*Restrictive feature(s):* densic material at 14 to 28 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E --	0 to 5 in gravelly sandy loam	moderately rapid	0.51 to 0.72 in	4.5 to 6.0
Bhir,Bx,Cx --	5 to 60 in gravelly sandy loam	impermeable	0.00 to 2.19 in	4.5 to 6.0

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

---

### 515D--Newfound gravelly sandy loam, 12 to 20 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 515DE--Newfound gravelly sandy loam, 12 to 25 percent slopes

#### Newfound

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 25 percent

*Parent material:* gravelly and/or loamy till

*Restrictive feature(s):* densic material at 14 to 28 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E --	0 to 5 in gravelly sandy loam	moderately rapid	0.51 to 0.72 in	4.5 to 6.0
Bhir,Bx,Cx --	5 to 60 in gravelly sandy loam	impermeable	0.00 to 2.19 in	4.5 to 6.0

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

---

### 515DE--Newfound gravelly sandy loam, 12 to 25 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 515EF--Newfound gravelly sandy loam, 18 to 35 percent slopes

#### Newfound

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 18 to 35 percent

*Parent material:* gravelly and/or loamy till

*Restrictive feature(s):* densic material at 14 to 28 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E --	0 to 5 in gravelly sandy loam	moderately rapid	0.51 to 0.72 in	4.5 to 6.0
Bhir,Bx,Cx --	5 to 60 in gravelly sandy loam	impermeable	0.00 to 2.19 in	4.5 to 6.0

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

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### 515EF--Newfound gravelly sandy loam, 18 to 35 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 515F--Newfound gravelly sandy loam, 25 to 40 percent slopes

#### Newfound

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 25 to 40 percent

*Parent material:* gravelly and/or loamy till

*Restrictive feature(s):* densic material at 14 to 28 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E --	0 to 5 in gravelly sandy loam	moderately rapid	0.51 to 0.72 in	4.5 to 6.0
Bhir,Bx,Cx --	5 to 60 in gravelly sandy loam	impermeable	0.00 to 2.19 in	4.5 to 6.0

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 515F--Newfound gravelly sandy loam, 25 to 40 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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### 530--Greenwood mucky peat

#### Greenwood

*Extent:* 85 percent of the unit

*Landform(s):* bogs

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .02

*Land capability, nonirrigated:* 7w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oe -- 0 to 6 in	mucky peat	rapid	2.66 to 3.25 in	
Oe2 -- 6 to 60 in	mucky peat	rapid	24.27 to 29.67 in	

## Map Unit Description (MN)

Lake County, Minnesota

### 531--Beseman muck

#### Beseman

*Extent:* 85 percent of the unit

*Landform(s):* bogs

*Slope gradient:* 0 to 1 percent

*Parent material:* organic material over loamy 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):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated:* 7w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 8 in	muck	moderately rapid	2.76 to 3.54 in	
Oa2 -- 8 to 36 in	muck	moderately rapid	9.78 to 12.58 in	
Cg -- 36 to 60 in	loam	moderately slow	2.64 to 4.32 in	

### 533--Loxley muck

#### Loxley

*Extent:* 85 percent of the unit

*Landform(s):* bogs

*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):* 3

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated:* 7w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 13 in	muck	moderately rapid	4.55 to 5.85 in	
Oa2 -- 13 to 60 in	muck	moderately rapid	16.40 to 21.08 in	

## Map Unit Description (MN)

Lake County, Minnesota

### 534--Mooselake mucky peat

#### Mooselake

*Extent:* 85 percent of the unit

*Landform(s):* swamps

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material

*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):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .02

*Land capability, nonirrigated:* 6w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oe -- 0 to 6 in	mucky peat	rapid	2.66 to 3.25 in	
Oe2 -- 6 to 72 in	mucky peat	rapid	29.76 to 36.38 in	

### 537--Lobo peat

#### Lobo

*Extent:* 85 percent of the unit

*Landform(s):* bogs

*Slope gradient:* 0 to 1 percent

*Parent material:* mossy organic material

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*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)* .02

*Land capability, nonirrigated:* 7w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 38 in	peat	very rapid	20.79 to 24.57 in	
Oe -- 38 to 60 in	mucky peat	rapid	9.92 to 12.13 in	

## Map Unit Description (MN)

Lake County, Minnesota

### 540--Seelyeville muck

#### Seelyeville

*Extent:* 85 percent of the unit

*Landform(s):* swamps

*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):* 3

*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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 10 in	muck	moderately rapid	3.44 to 4.43 in	
Oa2 -- 10 to 60 in	muck	moderately rapid	17.50 to 22.50 in	

### 544--Cathro muck

#### Cathro

*Extent:* 85 percent of the unit

*Landform(s):* swamps

*Slope gradient:* 0 to 1 percent

*Parent material:* organic material over loamy 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):* 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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 11 in	muck	moderately rapid	3.86 to 4.96 in	
Oa2 -- 11 to 23 in	muck	moderately rapid	4.13 to 5.31 in	
Cg -- 23 to 60 in	loam	moderate	4.07 to 8.14 in	

## Map Unit Description (MN)

Lake County, Minnesota

### 555AD--Barto gravelly loam, 0 to 18 percent slopes

#### Barto

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 18 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 8 to 20 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bhir -- 0 to 8 in	gravelly loam	moderately rapid	1.18 to 1.42 in	4.5 to 6.5
Bw -- 8 to 15 in	gravelly coarse sandy loam	moderately rapid	0.57 to 0.85 in	4.5 to 6.5
R -- 15 to 60 in	unweathered bedrock	impermeable		

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

---

### 555AD--Barto gravelly loam, 0 to 18 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 556AD--Insula gravelly sandy loam, 0 to 18 percent slopes

#### Insula

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 18 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 8 to 20 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	gravelly sandy loam	moderately rapid	0.28 to 0.44 in	4.5 to 6.5
Bw,BC -- 3 to 15 in	gravelly sandy loam	moderately rapid	0.94 to 1.54 in	4.5 to 6.5
R -- 15 to 60 in	unweathered bedrock	impermeable		

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

---

### 556AD--Insula gravelly sandy loam, 0 to 18 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 556DE--Insula gravelly sandy loam, 12 to 25 percent slopes

#### Insula

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 25 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 8 to 20 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	gravelly sandy loam	moderately rapid	0.28 to 0.44 in	4.5 to 6.5
Bw,BC -- 3 to 15 in	gravelly sandy loam	moderately rapid	0.94 to 1.54 in	4.5 to 6.5
R -- 15 to 60 in	unweathered bedrock	impermeable		

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

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### 556DE--Insula gravelly sandy loam, 12 to 25 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 557AD--Conic gravelly sandy loam, 0 to 18 percent slopes

#### Conic

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 18 percent

*Parent material:* loamy drift over loamy till

*Restrictive feature(s):* densic material at 12 to 30 inches  
lithic bedrock at 20 to 40 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 4s

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	gravelly sandy loam	moderately rapid	0.31 to 0.47 in	3.5 to 6.0
Bw,BC,BCd -- 3 to 30 in	gravelly sandy loam	slow	1.34 to 2.41 in	4.5 to 6.0
R -- 30 to 60 in	unweathered bedrock	impermeable		

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

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### 557AD--Conic gravelly sandy loam, 0 to 18 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 557DF--Conic gravelly sandy loam, 12 to 35 percent slopes

#### Conic

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 35 percent

*Parent material:* loamy drift over loamy till

*Restrictive feature(s):* densic material at 12 to 30 inches  
lithic bedrock at 20 to 40 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	gravelly sandy loam	moderately rapid	0.31 to 0.47 in	3.5 to 6.0
Bw,BC,BCd -- 3 to 30 in	gravelly sandy loam	slow	1.34 to 2.41 in	4.5 to 6.0
R -- 30 to 60 in	unweathered bedrock	impermeable		

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 557DF--Conic gravelly sandy loam, 12 to 35 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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### 614--Blackhoof muck

#### Blackhoof

*Extent:* 85 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* organic material over loamy till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated:* 6w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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Oa -- 0 to 11 in	muck	moderately rapid	6.06 to 7.17 in	
A -- 11 to 15 in	silty clay loam	slow	0.63 to 0.79 in	5.1 to 6.5
Bg,Bw,C -- 15 to 60 in	clay loam	slow	6.28 to 7.63 in	5.1 to 7.8

## Map Unit Description (MN)

Lake County, Minnesota

### 685--Oesterle fine sandy loam

#### Oesterle

*Extent:* 85 percent of the unit

*Landform(s):* outwash plains

*Slope gradient:* 0 to 3 percent

*Parent material:* loamy alluvium over sandy outwash

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated:* 3w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	fine sandy loam	moderately rapid	0.71 to 1.28 in	4.5 to 6.5
E/B -- 7 to 11 in	sandy loam	moderately rapid	0.35 to 0.79 in	4.5 to 6.5
Bt -- 11 to 31 in	gravelly sandy loam	moderately rapid	1.00 to 3.61 in	4.5 to 6.5
2C -- 31 to 60 in	gravelly sand	rapid	0.29 to 2.01 in	5.1 to 6.5

#### Newson

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 695B--Finland loam, 2 to 6 percent slopes

#### Finland

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 14 to 27 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 2e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.79 to 0.94 in	4.5 to 6.0
Bhs,Bs -- 4 to 20 in	loam	moderate	2.42 to 3.23 in	5.1 to 6.0
2Bw -- 20 to 39 in	gravelly fine sandy loam	slow	0.00 to 1.13 in	5.1 to 6.5
2Cd -- 39 to 60 in	gravelly fine sandy loam	impermeable	0.00 to 0.83 in	5.6 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 695C--Finland loam, 6 to 12 percent slopes

#### Finland

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 14 to 27 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.79 to 0.94 in	4.5 to 6.0
Bhs,Bs -- 4 to 20 in	loam	moderate	2.42 to 3.23 in	5.1 to 6.0
2Bw -- 20 to 39 in	gravelly fine sandy loam	slow	0.00 to 1.13 in	5.1 to 6.5
2Cd -- 39 to 60 in	gravelly fine sandy loam	impermeable	0.00 to 0.83 in	5.6 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 695D--Finland loam, 12 to 18 percent slopes

#### Finland

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 14 to 27 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 4e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.79 to 0.94 in	4.5 to 6.0
Bhs,Bs -- 4 to 20 in	loam	moderate	2.42 to 3.23 in	5.1 to 6.0
2Bw -- 20 to 39 in	gravelly fine sandy loam	slow	0.00 to 1.13 in	5.1 to 6.5
2Cd -- 39 to 60 in	gravelly fine sandy loam	impermeable	0.00 to 0.83 in	5.6 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 695E--Finland loam, 18 to 25 percent slopes

#### Finland

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 18 to 25 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 14 to 27 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.79 to 0.94 in	4.5 to 6.0
Bhs,Bs -- 4 to 20 in	loam	moderate	2.42 to 3.23 in	5.1 to 6.0
2Bw -- 20 to 39 in	gravelly fine sandy loam	slow	0.00 to 1.13 in	5.1 to 6.5
2Cd -- 39 to 60 in	gravelly fine sandy loam	impermeable	0.00 to 0.83 in	5.6 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 695F--Finland loam, 25 to 40 percent slopes

#### Finland

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 25 to 40 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 14 to 27 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loam	moderate	0.79 to 0.94 in	4.5 to 6.0
Bhs,Bs -- 4 to 20 in	loam	moderate	2.42 to 3.23 in	5.1 to 6.0
2Bw -- 20 to 39 in	gravelly fine sandy loam	slow	0.00 to 1.13 in	5.1 to 6.5
2Cd -- 39 to 60 in	gravelly fine sandy loam	impermeable	0.00 to 0.83 in	5.6 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 696--Hermantown silt loam

#### Hermantown

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 30 to 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .32

*Land capability, nonirrigated:* 3w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	silt loam	moderate	0.79 to 0.98 in	5.1 to 6.0
E,Bw1 -- 4 to 14 in	fine sandy loam	moderate	1.54 to 2.05 in	5.1 to 6.0
Bw2,Bw3 -- 14 to 31 in	sandy loam	moderate	2.03 to 3.05 in	5.1 to 6.5
2Bw4 -- 31 to 53 in	sandy loam	slow	2.20 to 3.09 in	5.1 to 6.5
2Cd -- 53 to 80 in	sandy loam	impermeable	0.27 to 1.87 in	6.1 to 7.3

#### Twig

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 697B--Toimi sandy loam, 2 to 6 percent slopes

#### Toimi

*Extent:* 85 percent of the unit

*Landform(s):* drumlins

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 20 to 50 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 3

*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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	sandy loam	moderate	0.43 to 0.79 in	5.1 to 6.5
EB,Bw1 -- 4 to 15 in	stony fine sandy loam	moderate	0.44 to 1.76 in	5.1 to 6.5
Bw2,BC -- 15 to 35 in	sandy loam	moderate	1.61 to 3.21 in	5.1 to 6.5
2Cd -- 35 to 80 in	gravelly sandy loam	impermeable	1.80 to 4.94 in	5.6 to 7.3

#### Bugcreek

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 697C--Toimi sandy loam, 6 to 12 percent slopes

#### Toimi

*Extent:* 85 percent of the unit

*Landform(s):* drumlins

*Slope gradient:* 6 to 12 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 20 to 50 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 3

*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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	sandy loam	moderate	0.43 to 0.79 in	5.1 to 6.5
EB,Bw1 -- 4 to 15 in	stony fine sandy loam	moderate	0.44 to 1.76 in	5.1 to 6.5
Bw2,BC -- 15 to 35 in	sandy loam	moderate	1.61 to 3.21 in	5.1 to 6.5
2Cd -- 35 to 80 in	gravelly sandy loam	impermeable	1.80 to 4.94 in	5.6 to 7.3

#### Bugcreek

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 697D--Toimi sandy loam, 12 to 18 percent slopes

#### Toimi

*Extent:* 85 percent of the unit

*Landform(s):* drumlins

*Slope gradient:* 12 to 18 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 20 to 50 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	sandy loam	moderate	0.43 to 0.79 in	5.1 to 6.5
EB,Bw1 -- 4 to 15 in	stony fine sandy loam	moderate	0.44 to 1.76 in	5.1 to 6.5
Bw2,BC -- 15 to 35 in	sandy loam	moderate	1.61 to 3.21 in	5.1 to 6.5
2Cd -- 35 to 80 in	gravelly sandy loam	impermeable	1.80 to 4.94 in	5.6 to 7.3

#### Bugcreek

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 714--Buhl loam

#### Buhl

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* loamy loess over clayey till

*Restrictive feature(s):* greater than 60 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .32

*Land capability, nonirrigated:* 3w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	loam	moderate	0.63 to 0.76 in	4.5 to 5.5
E,2Bt -- 3 to 48 in	clay	slow	4.49 to 7.18 in	5.1 to 6.5
2BCd,2Cd -- 48 to 60 in	clay	slow	1.06 to 1.77 in	6.6 to 7.8

#### Blackhoof

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 872--Pengilly and Winterfield soils

#### Pengilly, frequently flooded

*Extent:* 50 percent of the unit

*Landform(s):* swales on flood plains

*Slope gradient:* 0 to 1 percent

*Parent material:* 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):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 7w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	fine sandy loam	moderately rapid	0.51 to 0.87 in	5.6 to 7.3
Cg -- 4 to 60 in	stratified loamy very fine sand to silt loam	moderate	6.71 to 11.18 in	6.1 to 8.4

#### Winterfield, occasionally flooded

*Extent:* 50 percent of the unit

*Landform(s):* flood plains

*Slope gradient:* 0 to 1 percent

*Parent material:* sandy alluvium

*Restrictive feature(s):* greater than 60 inches

*Flooding:* occasional

*Ponding:* none

*Drainage class:* somewhat poorly 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:* 4w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	loamy sand	rapid	0.71 to 0.85 in	5.6 to 7.8
C1,C2 -- 7 to 31 in	coarse sand	rapid	1.44 to 2.64 in	5.6 to 7.8
C3 -- 31 to 60 in	sand	rapid	1.15 to 2.87 in	5.6 to 8.4

## Map Unit Description (MN)

Lake County, Minnesota

### 890B--Barto-Mesaba complex, 2 to 6 percent slopes

#### Barto

*Extent:* 50 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 8 to 20 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bhir -- 0 to 8 in	gravelly loam	moderately rapid	1.18 to 1.42 in	4.5 to 6.5
Bw -- 8 to 15 in	gravelly coarse sandy loam	moderately rapid	0.57 to 0.85 in	4.5 to 6.5
R -- 15 to 60 in	unweathered bedrock	impermeable		

#### Mesaba

*Extent:* 40 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 20 to 40 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 4s

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bhs -- 0 to 4 in	gravelly loam	moderately rapid	0.39 to 0.59 in	5.1 to 6.5
Bs,Bw -- 4 to 28 in	gravelly coarse sandy loam	moderately rapid	2.40 to 3.60 in	5.1 to 6.5
R -- 28 to 60 in	unweathered bedrock	impermeable		

## Map Unit Description (MN)

Lake County, Minnesota

### 890B--Barto-Mesaba complex, 2 to 6 percent slopes

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 890BD--Barto-Mesaba complex, 2 to 18 percent slopes

#### Barto

*Extent:* 50 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 18 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 8 to 20 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bhir -- 0 to 8 in	gravelly loam	moderately rapid	1.18 to 1.42 in	4.5 to 6.5
Bw -- 8 to 15 in	gravelly coarse sandy loam	moderately rapid	0.57 to 0.85 in	4.5 to 6.5
R -- 15 to 60 in	unweathered bedrock	impermeable		

#### Mesaba

*Extent:* 40 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 18 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 20 to 40 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bhs -- 0 to 4 in	gravelly loam	moderately rapid	0.39 to 0.59 in	5.1 to 6.5
Bs,Bw -- 4 to 28 in	gravelly coarse sandy loam	moderately rapid	2.40 to 3.60 in	5.1 to 6.5
R -- 28 to 60 in	unweathered bedrock	impermeable		

## Map Unit Description (MN)

Lake County, Minnesota

### 890BD--Barto-Mesaba complex, 2 to 18 percent slopes

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 890EF--Barto-Mesaba complex, 18 to 35 percent slopes

#### Barto

*Extent:* 50 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 18 to 35 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 8 to 20 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bhir -- 0 to 8 in	gravelly loam	moderately rapid	1.18 to 1.42 in	4.5 to 6.5
Bw -- 8 to 15 in	gravelly coarse sandy loam	moderately rapid	0.57 to 0.85 in	4.5 to 6.5
R -- 15 to 60 in	unweathered bedrock	impermeable		

#### Mesaba

*Extent:* 40 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 18 to 35 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 20 to 40 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bhs -- 0 to 4 in	gravelly loam	moderately rapid	0.39 to 0.59 in	5.1 to 6.5
Bs,Bw -- 4 to 28 in	gravelly coarse sandy loam	moderately rapid	2.40 to 3.60 in	5.1 to 6.5
R -- 28 to 60 in	unweathered bedrock	impermeable		

## Map Unit Description (MN)

Lake County, Minnesota

### 890EF--Barto-Mesaba complex, 18 to 35 percent slopes

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 952AD--Quetico-Rock outcrop complex, 0 to 18 percent slopes

#### Quetico

*Extent:* 60 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 18 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 4 to 10 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 7s

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bs -- 0 to 5 in	gravelly loam	moderate	0.67 to 1.02 in	4.5 to 5.5
R -- 5 to 60 in	unweathered bedrock	impermeable		

#### Rock outcrop

*Extent:* 30 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 18 percent

*Parent material:*

*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:*

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 952AD--Quetico-Rock outcrop complex, 0 to 18 percent slopes

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 952EF--Quetico-Rock outcrop complex, 12 to 40 percent slopes

#### Quetico

*Extent:* 60 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 40 percent

*Parent material:* loamy drift

*Restrictive feature(s):* lithic bedrock at 4 to 10 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 7s

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bs --	0 to 5 in gravelly loam	moderate	0.67 to 1.02 in	4.5 to 5.5
R --	5 to 60 in unweathered bedrock	impermeable		

#### Rock outcrop

*Extent:* 30 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 12 to 40 percent

*Parent material:*

*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:*

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

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### 952EF--Quetico-Rock outcrop complex, 12 to 40 percent slopes

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* drainageways

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 980--Blackhoof and Mahtowa soils

#### Blackhoof

*Extent:* 50 percent of the unit  
*Landform(s):* depressions on moraines  
*Slope gradient:* 0 to 1 percent  
*Parent material:* organic material over loamy till  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* frequent  
*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 4  
*Wind erodibility group (WEG):* 2  
*Wind erodibility index (WEI):* 134  
*Kw factor (surface layer)* .02  
*Land capability, nonirrigated:* 6w  
*Hydric soil:* yes  
*Hydrologic group:* D  
*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 11 in	muck	moderately rapid	6.06 to 7.17 in	
A -- 11 to 15 in	clay loam	slow	0.63 to 0.79 in	5.1 to 6.5
Bg,Bw,C -- 15 to 60 in	clay loam	slow	6.28 to 7.63 in	5.1 to 7.8

#### Mahtowa

*Extent:* 50 percent of the unit  
*Landform(s):* depressions on moraines  
*Slope gradient:* 0 to 1 percent  
*Parent material:* loamy till  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* frequent  
*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 4  
*Wind erodibility group (WEG):* 6  
*Wind erodibility index (WEI):* 48  
*Kw factor (surface layer)* .28  
*Land capability, nonirrigated:* 6w  
*Hydric soil:* yes  
*Hydrologic group:* C/D  
*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 12 in	silt loam	moderate	2.13 to 2.83 in	5.1 to 6.5
Bg -- 12 to 21 in	loam	moderately slow	1.54 to 1.72 in	6.1 to 7.3
Bw,C -- 21 to 60 in	loam	moderately rapid	5.46 to 7.41 in	6.6 to 7.8

## Map Unit Description (MN)

Lake County, Minnesota

### 990--Twig and Parent soils

#### Twig

*Extent:* 50 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* organic material over loamy till

*Restrictive feature(s):* densic material at 39 to 60 inches

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated:* 6w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 12 in	muck	moderately rapid	4.13 to 6.50 in	
A -- 12 to 20 in	silt loam	moderately slow	1.65 to 1.82 in	3.5 to 5.5
Eg -- 20 to 26 in	loam	impermeable	0.41 to 0.59 in	3.5 to 5.5
2Btg,2Bt -- 26 to 48 in	sandy loam	moderately slow	2.43 to 3.53 in	3.5 to 5.5
2BCd -- 48 to 72 in	sandy loam	impermeable	0.00 to 0.96 in	3.5 to 6.0

#### Parent

*Extent:* 50 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* loamy till

*Restrictive feature(s):* densic material at 39 to 60 inches

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
AB,Bg -- 7 to 28 in	fine sandy loam	moderate	2.50 to 3.55 in	5.6 to 7.3
BC -- 28 to 40 in	fine sandy loam	slow	0.00 to 0.98 in	6.1 to 7.3
BCd -- 40 to 60 in	fine sandy loam	impermeable	0.00 to 0.79 in	6.1 to 8.4

## Map Unit Description (MN)

Lake County, Minnesota

### 995--Borosapristis undifferentiated

#### Borosapristis

*Extent:* 85 percent of the unit

*Landform(s):* depressions

*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):* 3

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .02

*Land capability, nonirrigated:* 7w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 80 in	muck	moderately rapid	27.97 to 35.96 in	

## Map Unit Description (MN)

Lake County, Minnesota

### 1001--Alluvial land, occasionally flooded

#### Alluvial land, occasionally flooded

*Extent:* 90 percent of the unit

*Landform(s):* flood plains

*Slope gradient:* 0 to 2 percent

*Parent material:* alluvium

*Restrictive feature(s):* greater than 60 inches

*Flooding:* occasional

*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:* 4w

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 6 in	silt loam	moderate	1.06 to 1.42 in	5.1 to 6.5
C -- 6 to 80 in	stratified gravelly loamy coarse sand to silt loam	moderately rapid	5.92 to 17.76 in	5.1 to 6.5

#### Alluvial land, frequently flooded

*Extent:* 5 percent of the unit

*Landform(s):* flood plains

*Slope gradient:*

*Parent material:*

*Restrictive feature(s):* greater than 60 inches

*Flooding:* frequent

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 1002--Alluvial land, frequently flooded

#### Alluvial land, frequently flooded

*Extent:* 90 percent of the unit

*Landform(s):* swales on flood plains

*Slope gradient:* 0 to 2 percent

*Parent material:* alluvium

*Restrictive feature(s):* greater than 60 inches

*Flooding:* frequent

*Ponding:* none

*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:* 8w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 16 in	silt loam	moderate	2.91 to 3.87 in	5.6 to 7.8
Cg -- 16 to 80 in	stratified loamy sand to silt loam	rapid	2.55 to 12.76 in	5.6 to 7.8

### 1020F--Udorthents, very steep

#### Udorthents, very steep

*Extent:* 100 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 25 to 75 percent

*Parent material:*

*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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
C -- 0 to 60 in	loam	moderately rapid	4.79 to 8.38 in	6.6 to 9.0

# Map Unit Description (MN)

Lake County, Minnesota

## 1022--Dumps

### Dumps

*Extent:* 100 percent of the unit

*Landform(s):* moraines

*Slope gradient:*

*Parent material:*

*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:* 8s

*Hydric soil:*

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 1334B--Eveleth stony loam, 2 to 6 percent slopes

#### Eveleth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy drift over sandy and gravelly till

*Restrictive feature(s):* densic material at 24 to 39 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 3s

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	stony loam	moderate	0.31 to 0.50 in	4.5 to 6.0
Bw -- 3 to 28 in	stony loam	moderate	1.74 to 3.47 in	5.1 to 6.5
2BC -- 28 to 41 in	very gravelly loamy sand	moderate	0.26 to 0.91 in	5.1 to 6.5
2Cd -- 41 to 80 in	very gravelly fine sandy loam	slow	0.78 to 2.73 in	5.1 to 6.5

#### Bugcreek

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 1334C--Eveleth stony loam, 6 to 12 percent slopes

#### Eveleth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* sandy and gravelly till over loamy drift

*Restrictive feature(s):* densic material at 24 to 39 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	stony loam	moderate	0.31 to 0.50 in	4.5 to 6.0
Bw -- 3 to 18 in	stony loam	moderate	1.05 to 2.09 in	5.1 to 6.5
2BC -- 18 to 36 in	very gravelly sandy loam	moderate	0.35 to 1.24 in	5.1 to 6.5
2Cd -- 36 to 80 in	very gravelly loamy sand	slow	0.88 to 3.09 in	5.1 to 6.5

#### Bugcreek

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 1335BC--Eveleth stony loam, 2 to 12 percent slopes

#### Eveleth

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 12 percent

*Parent material:* sandy and gravelly till over loamy drift

*Restrictive feature(s):* densic material at 24 to 39 inches

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .24

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	stony loam	moderate	0.31 to 0.50 in	4.5 to 6.0
Bw -- 3 to 18 in	stony loam	moderate	1.05 to 2.09 in	5.1 to 6.5
2BC -- 18 to 36 in	very gravelly sandy loam	moderate	0.35 to 1.24 in	5.1 to 6.5
2Cd -- 36 to 80 in	very gravelly loamy sand	slow	0.88 to 3.09 in	5.1 to 6.5

#### Bugcreek

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 1336--Bugcreek stony loam

#### Bugcreek

*Extent:* 85 percent of the unit

*Landform(s):* depressions on drumlins

*Slope gradient:* 0 to 1 percent

*Parent material:* loamy drift over loamy till

*Restrictive feature(s):* densic material at 39 to 60 inches

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 4

*Wind erodibility group (WEG):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .15

*Land capability, nonirrigated:* 7w

*Hydric soil:* yes

*Hydrologic group:* D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 6 in	stony loam	moderate	0.59 to 0.65 in	5.1 to 6.5
Bw1,Bw2 -- 6 to 20 in	stony sandy loam	moderately rapid	0.99 to 1.42 in	5.1 to 6.5
Bw3,Bw4,Bw5 - 20 to 58 in	sandy loam	moderate	4.16 to 6.80 in	5.1 to 6.5
-				
2Cd -- 58 to 80 in	gravelly sandy loam	impermeable	0.44 to 2.20 in	5.6 to 7.3

## Map Unit Description (MN)

Lake County, Minnesota

### 1340A--Ontonagon-Omega complex, 0 to 2 percent slopes

#### Ontonagon

*Extent:* 50 percent of the unit  
*Landform(s):* lake plains  
*Slope gradient:* 0 to 2 percent  
*Parent material:* clayey glaciolacustrine deposits  
*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):* 4  
*Wind erodibility index (WEI):* 86  
*Kw factor (surface layer)* .28  
*Land capability, nonirrigated:* 3s  
*Hydric soil:* no  
*Hydrologic group:* D  
*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Omega

*Extent:* 40 percent of the unit  
*Landform(s):* lake 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):* 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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	loamy fine sand	rapid	0.31 to 0.38 in	4.5 to 5.5
Bs,BC,C -- 3 to 60 in	sand	rapid	2.83 to 3.97 in	5.1 to 7.3

## Map Unit Description (MN)

Lake County, Minnesota

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### 1340A--Ontonagon-Omega complex, 0 to 2 percent slopes

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 1340B--Ontonagon-Omega complex, 2 to 6 percent slopes

#### Ontonagon

*Extent:* 50 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 2 to 6 percent

*Parent material:* clayey glaciolacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Omega

*Extent:* 40 percent of the unit

*Landform(s):* lake 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):* 5

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 3e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	loamy fine sand	rapid	0.31 to 0.38 in	4.5 to 5.5
Bs,BC,C -- 3 to 60 in	sand	rapid	2.83 to 3.97 in	5.1 to 7.3

## Map Unit Description (MN)

Lake County, Minnesota

---

### 1340B--Ontonagon-Omega complex, 2 to 6 percent slopes

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 1340C--Ontonagon-Omega complex, 6 to 12 percent slopes

#### Ontonagon

*Extent:* 50 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 6 to 12 percent

*Parent material:* clayey glaciolacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 4e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Omega

*Extent:* 40 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 6 to 12 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):* 5

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 4e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	loamy fine sand	rapid	0.31 to 0.38 in	4.5 to 5.5
Bs,BC,C -- 3 to 60 in	sand	rapid	2.83 to 3.97 in	5.1 to 7.3

## Map Unit Description (MN)

Lake County, Minnesota

---

### 1340C--Ontonagon-Omega complex, 6 to 12 percent slopes

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 1340D--Ontonagon-Omega complex, 12 to 18 percent slopes

#### Ontonagon

*Extent:* 50 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 12 to 18 percent

*Parent material:* clayey glaciolacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Omega

*Extent:* 40 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 12 to 18 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):* 5

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	loamy fine sand	rapid	0.31 to 0.38 in	4.5 to 5.5
Bs,BC,C -- 3 to 60 in	sand	rapid	2.83 to 3.97 in	5.1 to 7.3

## Map Unit Description (MN)

Lake County, Minnesota

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### 1340D--Ontonagon-Omega complex, 12 to 18 percent slopes

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 1340E--Ontonagon-Omega complex, 18 to 25 percent slopes

#### Ontonagon

*Extent:* 50 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 18 to 25 percent

*Parent material:* clayey glaciolacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Omega

*Extent:* 40 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 18 to 25 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):* 5

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 6e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	loamy fine sand	rapid	0.31 to 0.38 in	4.5 to 5.5
Bs,BC,C -- 3 to 60 in	sand	rapid	2.83 to 3.97 in	5.1 to 7.3

## Map Unit Description (MN)

Lake County, Minnesota

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### 1340E--Ontonagon-Omega complex, 18 to 25 percent slopes

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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## Map Unit Description (MN)

Lake County, Minnesota

### 1340F--Ontonagon-Omega complex, 25 to 40 percent slopes

#### Ontonagon

*Extent:* 50 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 25 to 40 percent

*Parent material:* clayey glaciolacustrine deposits

*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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* D

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	silty clay	slow	0.85 to 0.99 in	4.5 to 6.5
B/E -- 7 to 13 in	silty clay	moderately slow	1.18 to 1.30 in	4.5 to 6.5
Bt,BC -- 13 to 32 in	clay	impermeable	2.08 to 2.46 in	4.5 to 7.3
C -- 32 to 60 in	clay	impermeable	3.07 to 3.63 in	7.4 to 8.4

#### Omega

*Extent:* 40 percent of the unit

*Landform(s):* lake plains

*Slope gradient:* 25 to 40 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):* 5

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .17

*Land capability, nonirrigated:* 7e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
E -- 0 to 3 in	loamy fine sand	rapid	0.31 to 0.38 in	4.5 to 5.5
Bs,BC,C -- 3 to 60 in	sand	rapid	2.83 to 3.97 in	5.1 to 7.3

## Map Unit Description (MN)

Lake County, Minnesota

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### 1340F--Ontonagon-Omega complex, 25 to 40 percent slopes

#### Bergland

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

Lake County, Minnesota

### 1823--Mesaba variant, 2 to 12 percent slopes

#### Mesaba, variant

*Extent:* 85 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 2 to 12 percent

*Parent material:* loamy till

*Restrictive feature(s):* lithic bedrock at 40 to 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)* .17

*Land capability, nonirrigated:* 4s

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bhs -- 0 to 4 in	gravelly loam	moderately rapid	0.39 to 0.59 in	4.5 to 6.5
Bs,Bw,BC -- 4 to 50 in	gravelly coarse sand	rapid	2.30 to 4.61 in	5.6 to 7.8
R -- 50 to 60 in	unweathered bedrock	impermeable		

#### Poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* flats

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>

## Map Unit Description (MN)

Lake County, Minnesota

### 1823--Mesaba variant, 2 to 12 percent slopes

#### Very poorly drained soils

*Extent:* 5 percent of the unit

*Landform(s):* depressions

*Slope gradient:*

*Parent material:*

*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:* yes

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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### NOTCOM--No Digital Data Available

#### NOTCOM

*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:*

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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# Map Unit Description (MN)

Lake 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:*

*Hydrologic group:*

*Potential for frost action:*

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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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.