

## Map Unit Description (MN)

Lincoln 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]

### GP--Pits, gravel-Udipsamments complex

#### Pits, gravel

*Extent:* 50 to 100 percent of the unit

*Landform(s):* moraines, outwash plains, stream terraces

*Slope gradient:* 0 to 50 percent

*Parent material:* sandy and gravelly outwash

*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>

#### Udipsamments

*Extent:* 15 to 30 percent of the unit

*Landform(s):* moraines, outwash plains, stream terraces

*Slope gradient:* 0 to 6 percent

*Parent material:* outwash

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

*Flooding:*

*Ponding:*

*Drainage class:* excessively drained

*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)

Lincoln County, Minnesota

### J1A--Parnell silty clay loam, depressional, 0 to 1 percent slopes

#### Parnell, depressional

*Extent:* 85 to 95 percent of the unit

*Landform(s):* depressions on lake plains, depressions on moraines, depressions on till plains

*Slope gradient:* 0 to 1 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 3w

*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>
A1,A2 -- 0 to 22 in	silty clay loam	moderately slow	3.97 to 4.85 in	6.1 to 7.3
Btg -- 22 to 55 in	silty clay	slow	4.30 to 5.29 in	6.1 to 7.3
BCg -- 55 to 80 in	silty clay loam	slow	3.97 to 4.71 in	6.6 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J2A--La Prairie loam, 0 to 2 percent slopes, occasionally flooded

#### La Prairie, occasionally flooded

*Extent:* 80 to 95 percent of the unit

*Landform(s):* flats on 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):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 1

*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>
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	6.6 to 8.4
A -- 9 to 38 in	loam	moderate	5.83 to 6.41 in	6.6 to 8.4
Bw -- 38 to 50 in	loam	moderate	2.01 to 2.24 in	6.6 to 8.4
C -- 50 to 60 in	loam	moderate	1.67 to 1.87 in	7.4 to 8.4

### J7B--Sverdrup sandy loam, 2 to 6 percent slopes

#### Sverdrup

*Extent:* 80 to 90 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	6.1 to 7.3
Bw -- 12 to 26 in	sandy loam	moderately rapid	1.70 to 1.98 in	6.1 to 7.3
2C -- 26 to 80 in	sand	rapid	2.70 to 3.78 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J11A--Vallers clay loam, 0 to 2 percent slopes

#### Vallers

*Extent:* 75 to 95 percent of the unit

*Landform(s):* rims on depressions on till plains, flats on till plains, drainageways on till plains

*Slope gradient:* 0 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* 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>
Ap,A -- 0 to 14 in	clay loam	moderate	2.41 to 2.69 in	7.4 to 8.4
Bkg -- 14 to 38 in	loam	moderate	3.60 to 4.56 in	7.4 to 8.4
Cg -- 38 to 80 in	loam	moderately slow	6.26 to 7.93 in	7.4 to 8.4

### J17A--Quam silty clay loam, depressional, 0 to 1 percent slopes

#### Quam, depressional

*Extent:* 85 to 95 percent of the unit

*Landform(s):* depressions on lake plains, depressions on moraines, depressions on till plains

*Slope gradient:* 0 to 1 percent

*Parent material:* lacustrine deposits

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	silty clay loam	moderately slow	1.77 to 2.17 in	6.6 to 7.3
A1,A2 -- 10 to 45 in	silty clay loam	moderately slow	5.61 to 6.66 in	6.6 to 7.3
Cg -- 45 to 80 in	silty clay loam	moderately slow	5.61 to 6.66 in	6.6 to 7.8

## Map Unit Description (MN)

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### J22A--Renshaw loam, 0 to 3 percent slopes

#### Renshaw

*Extent:* 75 to 95 percent of the unit  
*Landform(s):* flats on outwash plains  
*Slope gradient:* 0 to 3 percent  
*Parent material:* outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2  
*Wind erodibility group (WEG):* 6  
*Wind erodibility index (WEI):* 48  
*Kw factor (surface layer)* .20  
*Land capability, nonirrigated* 3s  
*Hydric soil:* no  
*Hydrologic group:* B  
*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw -- 7 to 15 in	loam	moderately rapid	1.34 to 1.50 in	6.6 to 7.3
2Bk -- 15 to 20 in	gravelly loamy sand	very rapid	0.26 to 0.36 in	7.4 to 8.4
2C -- 20 to 60 in	gravelly loamy sand	very rapid	1.59 to 2.39 in	7.4 to 8.4

### J23A--Lamoure silty clay loam, 0 to 2 percent slopes, occasionally flooded

#### Lamoure, occasionally flooded

*Extent:* 75 to 95 percent of the unit  
*Landform(s):* flats on flood plains  
*Slope gradient:* 0 to 2 percent  
*Parent material:* alluvium  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* occasional  
*Ponding:* none  
*Drainage class:* poorly drained

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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1,A2 -- 0 to 27 in	silty clay loam	moderate	4.89 to 5.98 in	7.4 to 8.4
Cg1 -- 27 to 34 in	silty clay loam	moderate	1.07 to 1.27 in	7.4 to 8.4
Cg2 -- 34 to 60 in	silt loam	moderate	5.20 to 5.72 in	7.4 to 8.4

## Map Unit Description (MN)

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### J25A--Rauville silty clay loam, 0 to 1 percent slopes, frequently flooded

#### Rauville, frequently flooded

*Extent:* 80 to 95 percent of the unit

*Landform(s):* flats on flood plains

*Slope gradient:* 0 to 1 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):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 6w

*Hydric soil:* yes

*Hydrologic group:* B/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>
A1,A2 -- 0 to 27 in	silty clay loam	moderate	4.89 to 5.98 in	7.4 to 8.4
Cg -- 27 to 45 in	silty clay loam	moderate	2.83 to 3.37 in	7.4 to 8.4
2Cg -- 45 to 60 in	stratified gravelly sand to clay loam	moderately rapid	1.20 to 2.24 in	7.4 to 8.4

### J26B--Darnen loam, 2 to 6 percent slopes

#### Darnen

*Extent:* 85 to 95 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* colluvium

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 24 in	loam	moderate	4.80 to 5.28 in	6.6 to 7.3
AB,Bw1 -- 24 to 34 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw2 -- 34 to 80 in	loam	moderate	7.83 to 8.75 in	6.6 to 8.4

## Map Unit Description (MN)

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### J31B--Arvilla-Sandberg complex, 2 to 6 percent slopes

#### Arvilla

*Extent:* 35 to 55 percent of the unit  
*Landform(s):* hills on outwash plains  
*Slope gradient:* 2 to 6 percent  
*Parent material:* outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2  
*Wind erodibility group (WEG):* 3  
*Wind erodibility index (WEI):* 86  
*Kw factor (surface layer)* .15  
*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>
Ap -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw -- 9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk -- 14 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C -- 48 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4

#### Sandberg

*Extent:* 30 to 50 percent of the unit  
*Landform(s):* hills on outwash plains  
*Slope gradient:* 2 to 6 percent  
*Parent material:* outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5  
*Wind erodibility group (WEG):* 5  
*Wind erodibility index (WEI):* 56  
*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>
Ap -- 0 to 8 in	gravelly sandy loam	very rapid	0.39 to 1.02 in	6.1 to 7.8
Bk -- 8 to 32 in	very gravelly sand	very rapid	0.48 to 1.44 in	7.4 to 8.4
C -- 32 to 80 in	gravelly sand	very rapid	0.96 to 2.88 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J32A--Bigstone silty clay loam, depressional, 0 to 1 percent slopes

#### Bigstone, depressional

*Extent:* 70 to 90 percent of the unit

*Landform(s):* depressions on lake plains, depressions on moraines, depressions on till plains

*Slope gradient:* 0 to 1 percent

*Parent material:* lacustrine deposits

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	7.4 to 8.4
A -- 10 to 30 in	silty clay loam	moderate	3.61 to 4.42 in	7.4 to 8.4
Cg -- 30 to 80 in	loam	moderate	7.50 to 9.50 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J42C--Sandberg-Arvilla complex, 6 to 12 percent slopes

#### Sandberg

*Extent:* 50 to 70 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 6 to 12 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .17

*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>
Ap -- 0 to 10 in	gravelly sandy loam	very rapid	0.49 to 1.28 in	6.1 to 7.8
Bk -- 10 to 22 in	gravelly sand	very rapid	0.24 to 0.73 in	7.4 to 8.4
C -- 22 to 80 in	gravelly sand	very rapid	1.16 to 3.47 in	7.4 to 8.4

#### Arvilla

*Extent:* 25 to 35 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 6 to 12 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .15

*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>
Ap -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw -- 9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk -- 14 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C -- 48 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4

## Map Unit Description (MN)

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### J45F--Sandberg sandy loam, 12 to 40 percent slopes

#### Sandberg

*Extent:* 70 to 90 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 12 to 40 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*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>
A1,A2 -- 0 to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk -- 12 to 28 in	gravelly sand	very rapid	0.32 to 0.97 in	7.4 to 8.4
C -- 28 to 80 in	gravelly sand	very rapid	1.04 to 3.12 in	7.4 to 8.4

### J47A--Swenoda sandy loam, 1 to 3 percent slopes

#### Swenoda, moderately wet

*Extent:* 75 to 95 percent of the unit

*Landform(s):* swales on outwash plains, flats on outwash plains

*Slope gradient:* 1 to 3 percent

*Parent material:* outwash over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .15

*Land capability, nonirrigated* 2s

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 17 in	sandy loam	moderately rapid	2.20 to 2.54 in	6.1 to 7.3
Bw -- 17 to 29 in	sandy loam	moderately rapid	1.46 to 1.71 in	6.6 to 7.3
2C -- 29 to 80 in	silt loam	moderate	10.16 to 11.17 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J48A--Bigstone and Parnell soils, ponded, 0 to 1 percent slopes

#### Bigstone, ponded

<i>Extent:</i> 0 to 85 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> depressions on moraines, depressions on lake plains, depressions on till plains	<i>Wind erodibility group (WEG):</i> 8
<i>Slope gradient:</i> 0 to 1 percent	<i>Wind erodibility index (WEI):</i> 0
<i>Parent material:</i> lacustrine deposits	<i>Kw factor (surface layer)</i> .24
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 8w
<i>Flooding:</i> none	<i>Hydric soil:</i> yes
<i>Ponding:</i> frequent	<i>Hydrologic group:</i> B/D
<i>Drainage class:</i> very poorly drained	<i>Potential for frost action:</i> high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1 -- 0 to 18 in	silty clay loam	moderate	3.26 to 3.98 in	7.4 to 8.4
A2 -- 18 to 48 in	silty clay loam	moderate	5.39 to 6.58 in	7.4 to 8.4
2Cg -- 48 to 80 in	loam	moderate	4.78 to 6.06 in	7.4 to 8.4

#### Parnell, ponded

<i>Extent:</i> 0 to 85 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> depressions on moraines, depressions on lake plains, depressions on till plains	<i>Wind erodibility group (WEG):</i> 8
<i>Slope gradient:</i> 0 to 1 percent	<i>Wind erodibility index (WEI):</i> 0
<i>Parent material:</i> till	<i>Kw factor (surface layer)</i> .32
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 8w
<i>Flooding:</i> none	<i>Hydric soil:</i> yes
<i>Ponding:</i> frequent	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> very poorly drained	<i>Potential for frost action:</i> high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1,A2 -- 0 to 22 in	silty clay loam	moderately slow	3.97 to 4.85 in	6.1 to 7.3
Btg -- 22 to 55 in	silty clay	slow	4.30 to 5.29 in	6.1 to 7.3
BCg -- 55 to 80 in	silty clay loam	slow	3.97 to 4.71 in	6.6 to 8.4

## Map Unit Description (MN)

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### J57A--Balaton loam, 1 to 3 percent slopes

#### Balaton

*Extent:* 75 to 95 percent of the unit

*Landform(s):* knolls on till plains

*Slope gradient:* 1 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2s

*Hydric soil:* no

*Hydrologic group:* B/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>
Ap,A -- 0 to 13 in	loam	moderate	2.60 to 2.86 in	7.4 to 8.4
ABk,Bk -- 13 to 31 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C -- 31 to 80 in	loam	moderate	7.32 to 9.28 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J70A--Brandt silty clay loam, 0 to 2 percent slopes

#### Brandt

*Extent:* 80 to 90 percent of the unit

*Landform(s):* flats on outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* loess over 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):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	silty clay loam	moderate	1.28 to 1.56 in	6.1 to 7.3
Bw1,Bw2,Bw3 -- 7 to 34 in	silty clay loam	moderate	4.28 to 5.09 in	6.1 to 7.3
Bk1 -- 34 to 44 in	silt loam	moderate	2.05 to 2.25 in	7.4 to 8.4
2Bk2,2C1 -- 44 to 57 in	gravelly loam	moderately rapid	1.04 to 1.30 in	7.4 to 8.4
2C2 -- 57 to 60 in	gravelly sand	very rapid	0.08 to 0.17 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J71A--Brookings silty clay loam, 1 to 3 percent slopes

#### Brookings

*Extent:* 75 to 85 percent of the unit

*Landform(s):* drainageways on till plains, flats on till plains

*Slope gradient:* 1 to 3 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 1

*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>
Ap -- 0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
Bw1,Bw2,Bw3 -- 9 to 30 in	silty clay loam	moderate	3.34 to 3.96 in	6.6 to 7.3
2BC,2C -- 30 to 60 in	clay loam	moderately slow	4.19 to 5.39 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J72B--Renshaw-Sandberg complex, 2 to 6 percent slopes

#### Renshaw

*Extent:* 65 to 85 percent of the unit  
*Landform(s):* hills on outwash plains  
*Slope gradient:* 2 to 6 percent  
*Parent material:* outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2  
*Wind erodibility group (WEG):* 6  
*Wind erodibility index (WEI):* 48  
*Kw factor (surface layer)* .20  
*Land capability, nonirrigated* 3e  
*Hydric soil:* no  
*Hydrologic group:* B  
*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw -- 7 to 15 in	loam	moderately rapid	1.34 to 1.50 in	6.6 to 7.3
2Bk -- 15 to 20 in	gravelly loamy sand	very rapid	0.26 to 0.36 in	7.4 to 8.4
2C -- 20 to 60 in	gravelly loamy sand	very rapid	1.59 to 2.39 in	7.4 to 8.4

#### Sandberg

*Extent:* 10 to 20 percent of the unit  
*Landform(s):* hills on outwash plains  
*Slope gradient:* 2 to 6 percent  
*Parent material:* outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5  
*Wind erodibility group (WEG):* 3  
*Wind erodibility index (WEI):* 86  
*Kw factor (surface layer)* .15  
*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>
A1,A2 -- 0 to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk -- 12 to 28 in	gravelly sand	very rapid	0.48 to 0.81 in	7.4 to 8.4
C -- 28 to 80 in	gravelly sand	very rapid	1.56 to 2.60 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J73D2--Buse clay loam, 12 to 18 percent slopes, moderately eroded

#### Buse, moderately eroded

*Extent:* 65 to 80 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 12 to 18 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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>
Ap -- 0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk -- 7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C -- 22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

### J73E--Buse clay loam, 18 to 25 percent slopes

#### Buse

*Extent:* 75 to 85 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 18 to 25 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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>
Ap -- 0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk -- 7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C -- 22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J73F--Buse clay loam, 25 to 40 percent slopes

#### Buse

*Extent:* 75 to 85 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 25 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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>
Ap -- 0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk -- 7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C -- 22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

### J74A--Estelline silty clay loam, 0 to 2 percent slopes

#### Estelline

*Extent:* 75 to 85 percent of the unit

*Landform(s):* flats on outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* loess over outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2s

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,AB -- 0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw1,Bw2,Bw3 -- 10 to 30 in	silty clay loam	moderate	3.21 to 3.81 in	6.1 to 7.3
2C -- 30 to 60 in	gravelly sand	very rapid	0.90 to 1.80 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J74B--Estelline silty clay loam, 2 to 6 percent slopes

#### Estelline

*Extent:* 80 to 90 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 2 to 6 percent

*Parent material:* loess over outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,AB -- 0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw1,Bw2,Bw3 -- 10 to 30 in	silty clay loam	moderate	3.21 to 3.81 in	6.1 to 7.3
2C -- 30 to 60 in	gravelly sand	very rapid	0.90 to 1.80 in	7.4 to 8.4

### J75A--Fordville loam, 0 to 2 percent slopes

#### Fordville

*Extent:* 80 to 90 percent of the unit

*Landform(s):* flats on outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 2s

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	loam	moderate	1.18 to 1.30 in	6.1 to 7.3
Bw -- 6 to 24 in	loam	moderate	3.08 to 3.44 in	6.1 to 7.3
2C -- 24 to 80 in	gravelly loamy sand	very rapid	2.24 to 3.35 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J75B--Fordville loam, 2 to 6 percent slopes

#### Fordville

*Extent:* 80 to 90 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	loam	moderate	1.18 to 1.30 in	6.1 to 7.3
Bw -- 6 to 24 in	loam	moderate	3.08 to 3.44 in	6.1 to 7.3
2C -- 24 to 80 in	gravelly loamy sand	very rapid	2.24 to 3.35 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J78A--Lismore silty clay loam, 1 to 3 percent slopes

#### Lismore

*Extent:* 65 to 85 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 1 to 3 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 1

*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>
Ap -- 0 to 8 in	silty clay loam	moderate	1.42 to 1.73 in	6.1 to 7.3
A -- 8 to 17 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
2Bw1,2Bw2 -- 17 to 32 in	clay loam	moderately slow	2.24 to 2.84 in	6.1 to 7.3
2Bk -- 32 to 48 in	clay loam	moderately slow	2.26 to 2.91 in	7.4 to 8.4
2C -- 48 to 60 in	clay loam	moderately slow	1.65 to 2.13 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J79B--Vienna-Brookings complex, 1 to 4 percent slopes

#### Vienna, occasional saturation

*Extent:* 45 to 65 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 1 to 4 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* 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>
Ap -- 0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw -- 10 to 15 in	silty clay loam	moderate	0.82 to 0.97 in	6.1 to 7.3
2Bw -- 15 to 23 in	clay loam	moderately slow	1.10 to 1.42 in	6.1 to 7.3
2Bk,2C -- 23 to 60 in	clay loam	moderately slow	5.18 to 6.66 in	7.4 to 8.4

#### Brookings

*Extent:* 25 to 45 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 1 to 4 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 1

*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>
Ap -- 0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
Bw1,Bw2,Bw3 -- 9 to 30 in	silty clay loam	moderate	3.34 to 3.96 in	6.6 to 7.3
2BC,2C -- 30 to 60 in	clay loam	moderately slow	4.19 to 5.39 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J80A--Lamoure-La Prairie complex, channeled, 0 to 2 percent slopes, frequently flooded

#### Lamoure, channeled, frequently flooded

*Extent:* 40 to 60 percent of the unit

*Landform(s):* flats 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:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 5w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1,A2 -- 0 to 27 in	silty clay loam	moderate	4.89 to 5.98 in	7.4 to 8.4
Cg1 -- 27 to 34 in	silty clay loam	moderate	1.07 to 1.27 in	7.4 to 8.4
Cg2 -- 34 to 60 in	silt loam	moderate	5.20 to 5.72 in	7.4 to 8.4

#### La Prairie, channeled, frequently flooded

*Extent:* 30 to 50 percent of the unit

*Landform(s):* flats 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:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 5w

*Hydric soil:* yes

*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>
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	6.6 to 8.4
A -- 9 to 38 in	loam	moderate	5.83 to 6.41 in	6.6 to 8.4
Bw -- 38 to 50 in	loam	moderate	2.01 to 2.24 in	6.6 to 8.4
C -- 50 to 60 in	loam	moderate	1.67 to 1.87 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J81C2--Renshaw-Barnes complex, 6 to 12 percent slopes, moderately eroded

#### Renshaw, moderately eroded

*Extent:* 60 to 80 percent of the unit  
*Landform(s):* hills on outwash plains  
*Slope gradient:* 6 to 12 percent  
*Parent material:* outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2  
*Wind erodibility group (WEG):* 6  
*Wind erodibility index (WEI):* 48  
*Kw factor (surface layer)* .20  
*Land capability, nonirrigated* 4e  
*Hydric soil:* no  
*Hydrologic group:* B  
*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw -- 7 to 15 in	loam	moderately rapid	1.34 to 1.50 in	6.6 to 7.3
2Bk -- 15 to 20 in	gravelly loamy sand	very rapid	0.26 to 0.36 in	7.4 to 8.4
2C -- 20 to 60 in	gravelly loamy sand	very rapid	1.59 to 2.39 in	7.4 to 8.4

#### Barnes, moderately eroded

*Extent:* 10 to 30 percent of the unit  
*Landform(s):* hills on outwash plains  
*Slope gradient:* 6 to 12 percent  
*Parent material:* till  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5  
*Wind erodibility group (WEG):* 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>
Ap -- 0 to 11 in	clay loam	moderately slow	1.87 to 2.09 in	6.1 to 7.3
Bw -- 11 to 17 in	clay loam	moderately slow	0.89 to 1.12 in	6.1 to 7.3
Bk -- 17 to 31 in	clay loam	moderately slow	1.93 to 2.48 in	7.4 to 8.4
BC -- 31 to 60 in	clay loam	moderately slow	4.08 to 5.24 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J83F--Sandberg-Buse-Everts complex, 12 to 40 percent slopes

#### Sandberg

*Extent:* 45 to 65 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 12 to 40 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .15

*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>
A1,A2 -- 0 to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk -- 12 to 28 in	gravelly sand	very rapid	0.48 to 0.81 in	7.4 to 8.4
C -- 28 to 80 in	gravelly sand	very rapid	1.56 to 2.60 in	7.4 to 8.4

#### Buse

*Extent:* 15 to 35 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 12 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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>
Ap -- 0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk -- 7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C -- 22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J83F--Sandberg-Buse-Everts complex, 12 to 40 percent slopes

#### Events

*Extent:* 10 to 20 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 12 to 40 percent

*Parent material:* colluvium

*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:* 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>
Ap,AB -- 0 to 38 in	loam	moderate	7.64 to 8.40 in	6.6 to 7.3
Bw -- 38 to 54 in	loam	moderate	2.68 to 2.99 in	6.1 to 7.3
2C -- 54 to 80 in	very gravelly coarse sand	very rapid	0.52 to 1.04 in	7.4 to 8.4

### J84A--Strayhoss loam, 0 to 2 percent slopes

#### Strayhoss

*Extent:* 80 to 90 percent of the unit

*Landform(s):* flats on outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .20

*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>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw1,Bw2,Bw3 -- 7 to 30 in	silt loam	moderate	4.57 to 5.02 in	6.1 to 7.3
Bk -- 30 to 36 in	loam	moderate	1.00 to 1.12 in	7.4 to 8.4
2C1,2C2 -- 36 to 60 in	loamy sand	rapid	1.92 to 2.40 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J84B--Strayhoss loam, 2 to 6 percent slopes

#### Strayhoss

*Extent:* 80 to 90 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .20

*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>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw1,Bw2,Bw3 -- 7 to 30 in	silt loam	moderate	4.57 to 5.02 in	6.1 to 7.3
Bk -- 30 to 36 in	loam	moderate	1.00 to 1.12 in	7.4 to 8.4
2C1,2C2 -- 36 to 60 in	loamy sand	rapid	1.92 to 2.40 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J85A--Trosky silty clay loam, 0 to 2 percent slopes

#### Trosky

*Extent:* 85 to 95 percent of the unit

*Landform(s):* drainageways on outwash plains, flats on outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* loess over outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer):* .32

*Land capability, nonirrigated:* 2w

*Hydric soil:* yes

*Hydrologic group:* B/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>
Ap,A,AB -- 0 to 20 in	silty clay loam	moderate	3.61 to 4.42 in	7.4 to 8.4
Bkg1,Bkg2 -- 20 to 38 in	silty clay loam	moderate	2.90 to 3.44 in	7.4 to 8.4
2Cg -- 38 to 60 in	gravelly coarse sand	rapid	0.87 to 1.30 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J86B--Vienna silty clay loam, 3 to 6 percent slopes

#### Vienna, occasional saturation

*Extent:* 80 to 90 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 3 to 6 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* 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>
Ap -- 0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw -- 10 to 15 in	silty clay loam	moderate	0.82 to 0.97 in	6.1 to 7.3
2Bw -- 15 to 23 in	clay loam	moderately slow	1.10 to 1.42 in	6.1 to 7.3
2Bk,2C -- 23 to 60 in	clay loam	moderately slow	5.18 to 6.66 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J88B--Kranzburg silty clay loam, 3 to 6 percent slopes

#### Kranzburg, occasional saturation

*Extent:* 80 to 90 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 3 to 6 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2e

*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>
Ap -- 0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
Bw1,Bw2 -- 9 to 25 in	silty clay loam	moderate	2.58 to 3.07 in	6.6 to 7.3
2Bk -- 25 to 57 in	clay loam	moderately slow	4.46 to 5.74 in	7.4 to 8.4
2C -- 57 to 60 in	clay loam	moderately slow	0.39 to 0.50 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J89B--Lanona-Swenoda complex, 2 to 6 percent slopes

#### Lanona, occasional saturation

*Extent:* 40 to 60 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .17

*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>
Ap -- 0 to 8 in	fine sandy loam	moderately rapid	1.26 to 1.42 in	6.1 to 7.3
Bw1,Bw2 -- 8 to 28 in	fine sandy loam	moderately rapid	3.01 to 3.41 in	6.6 to 7.3
2Bk -- 28 to 42 in	loam	moderate	2.41 to 2.69 in	7.4 to 8.4
2C -- 42 to 60 in	loam	moderate	3.01 to 3.37 in	7.4 to 8.4

#### Swenoda

*Extent:* 30 to 50 percent of the unit

*Landform(s):* hills on outwash plains

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .15

*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>
Ap,A -- 0 to 17 in	sandy loam	moderately rapid	2.20 to 2.54 in	6.1 to 7.3
Bw -- 17 to 29 in	sandy loam	moderately rapid	1.46 to 1.71 in	6.6 to 7.3
2C -- 29 to 80 in	silt loam	moderate	10.16 to 11.17 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J90B--Kranzburg-Brookings complex, 1 to 4 percent slopes

#### Kranzburg, occasional saturation

*Extent:* 45 to 65 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 1 to 4 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2e

*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>
Ap -- 0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
Bw1,Bw2 -- 9 to 25 in	silty clay loam	moderate	2.58 to 3.07 in	6.6 to 7.3
2Bk -- 25 to 57 in	clay loam	moderately slow	4.46 to 5.74 in	7.4 to 8.4
2C -- 57 to 60 in	clay loam	moderately slow	0.39 to 0.50 in	7.4 to 8.4

#### Brookings

*Extent:* 25 to 45 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 1 to 4 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 1

*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>
Ap -- 0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
Bw1,Bw2,Bw3 -- 9 to 30 in	silty clay loam	moderate	3.34 to 3.96 in	6.6 to 7.3
2BC,2C -- 30 to 60 in	clay loam	moderately slow	4.19 to 5.39 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J91B--Darnen loam, stratified substratum, 2 to 6 percent slopes

#### Darnen, stratified substratum

*Extent:* 85 to 95 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* colluvium

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A1,A2 -- 0 to 30 in	loam	moderate	5.98 to 6.58 in	6.6 to 7.3
Bk1,Bk2 -- 30 to 62 in	loam	moderate	5.42 to 6.06 in	7.4 to 8.4
C1 -- 62 to 74 in	loamy sand	moderately rapid	0.98 to 1.59 in	7.4 to 8.4
C2 -- 74 to 80 in	clay loam	moderately slow	0.77 to 1.12 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J92C2--Buse-Vienna complex, 6 to 12 percent slopes, moderately eroded

#### Buse, moderately eroded

*Extent:* 45 to 55 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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>
Ap -- 0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	7.4 to 8.4
ABk,Bk -- 7 to 22 in	clay loam	moderately slow	2.09 to 2.69 in	7.4 to 8.4
C -- 22 to 60 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

#### Vienna, moderately eroded

*Extent:* 15 to 25 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 6 to 12 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* 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>
Ap -- 0 to 10 in	silty clay loam	moderate	1.77 to 2.17 in	6.1 to 7.3
Bw -- 10 to 15 in	silty clay loam	moderate	0.82 to 0.97 in	6.1 to 7.3
2Bw -- 15 to 23 in	clay loam	moderately slow	1.10 to 1.42 in	6.1 to 7.3
2Bk,2C -- 23 to 60 in	clay loam	moderately slow	5.18 to 6.66 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J93A--Hidewood-Badger complex, 0 to 2 percent slopes

#### Hidewood

*Extent:* 40 to 60 percent of the unit

*Landform(s):* flats on till plains, drainageways on till plains

*Slope gradient:* 0 to 2 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	silty clay loam	moderate	1.42 to 1.73 in	7.4 to 8.4
A -- 8 to 27 in	silty clay loam	moderate	3.47 to 4.24 in	7.4 to 8.4
Cg -- 27 to 42 in	silty clay loam	moderate	2.39 to 2.84 in	7.4 to 8.4
2Cg -- 42 to 80 in	clay loam	moderately slow	5.29 to 6.80 in	7.4 to 8.4

#### Badger

*Extent:* 20 to 40 percent of the unit

*Landform(s):* drainageways on till plains

*Slope gradient:* 0 to 2 percent

*Parent material:* loess over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 2w

*Hydric soil:* no

*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>
Ap -- 0 to 9 in	silty clay loam	moderately slow	1.63 to 1.99 in	6.1 to 7.3
Bt1,Bt2 -- 9 to 35 in	silty clay	slow	3.38 to 4.16 in	6.1 to 7.3
BCg,Cg -- 35 to 55 in	silty clay loam	moderately slow	3.21 to 3.81 in	6.6 to 8.4
2Cg -- 55 to 60 in	clay loam	moderately slow	0.66 to 0.76 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J95E--Buse, stony-Wilno complex, 18 to 25 percent slopes

#### Buse, stony

*Extent:* 65 to 85 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 18 to 25 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk -- 8 to 37 in	loam	moderate	4.37 to 5.54 in	7.4 to 8.4
C -- 37 to 80 in	loam	moderately slow	6.44 to 8.15 in	7.4 to 8.4

#### Wilno

*Extent:* 10 to 20 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 18 to 25 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 6e

*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 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB -- 42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2 -- 52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3

## Map Unit Description (MN)

Lincoln County, Minnesota

### J95F--Buse, stony-Wilno complex, 25 to 40 percent slopes

#### Buse, stony

*Extent:* 65 to 85 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 25 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk -- 8 to 37 in	loam	moderate	4.37 to 5.54 in	7.4 to 8.4
C -- 37 to 80 in	loam	moderately slow	6.44 to 8.15 in	7.4 to 8.4

#### Wilno

*Extent:* 10 to 20 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 25 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*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>
A -- 0 to 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB -- 42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2 -- 52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3

## Map Unit Description (MN)

Lincoln County, Minnesota

### J96B--Barnes-Buse complex, 3 to 6 percent slopes

#### Barnes, occasional saturation

*Extent:* 55 to 75 percent of the unit  
*Landform(s):* hills on moraines, hills on till plains  
*Slope gradient:* 3 to 6 percent  
*Parent material:* till  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* well drained

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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 11 in	loam	moderate	2.20 to 2.43 in	6.1 to 7.3
Bw -- 11 to 26 in	loam	moderate	2.54 to 2.84 in	6.1 to 7.3
Bk -- 26 to 44 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C -- 44 to 80 in	loam	moderately slow	5.37 to 6.81 in	7.4 to 8.4

#### Buse

*Extent:* 10 to 20 percent of the unit  
*Landform(s):* hills on moraines, hills on till plains  
*Slope gradient:* 3 to 6 percent  
*Parent material:* till  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* well drained

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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk -- 8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C -- 40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J96C2--Barnes-Buse complex, 6 to 12 percent slopes, moderately eroded

#### Barnes, moderately eroded

*Extent:* 40 to 60 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*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>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw1,Bw2 -- 7 to 19 in	loam	moderate	2.01 to 2.24 in	6.1 to 7.3
Bk -- 19 to 37 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C -- 37 to 60 in	loam	moderately slow	3.43 to 4.34 in	7.4 to 8.4

#### Buse, moderately eroded

*Extent:* 20 to 40 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2 -- 8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C -- 40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J97B--Singsaas-Oak Lake complex, 1 to 6 percent slopes

#### Singsaas, occasional saturation

*Extent:* 55 to 75 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 1 to 6 percent

*Parent material:* lacustrine deposits over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* 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>
Ap -- 0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	6.1 to 7.3
AB -- 9 to 13 in	silty clay loam	moderate	0.71 to 0.87 in	6.1 to 7.3
Bw -- 13 to 19 in	silty clay loam	moderate	0.94 to 1.12 in	6.6 to 7.3
2Bk -- 19 to 41 in	loam	moderately slow	3.31 to 4.19 in	7.4 to 8.4
2C -- 41 to 80 in	loam	moderately slow	5.85 to 7.41 in	7.4 to 8.4

#### Oak Lake

*Extent:* 15 to 25 percent of the unit

*Landform(s):* swales on till plains, flats on till plains

*Slope gradient:* 1 to 3 percent

*Parent material:* lacustrine deposits over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 1

*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>
Ap -- 0 to 8 in	silty clay loam	moderate	1.42 to 1.73 in	6.1 to 7.3
AB -- 8 to 16 in	silty clay loam	moderate	1.49 to 1.82 in	6.1 to 7.3
Bw -- 16 to 22 in	silty clay loam	moderate	0.94 to 1.12 in	6.6 to 7.3
Bk -- 22 to 30 in	silty clay loam	moderate	1.26 to 1.50 in	7.4 to 8.4
2C -- 30 to 80 in	clay loam	moderately slow	7.00 to 9.00 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J98A--Parnell silty clay loam, 0 to 2 percent slopes

#### Parnell

*Extent:* 80 to 95 percent of the unit

*Landform(s):* depressions on lake plains, depressions on moraines, depressions on till plains

*Slope gradient:* 0 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 2w

*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>
Ap,A --	0 to 16 in	silty clay loam	moderately slow	2.91 to 3.55 in	6.1 to 7.3
Btg --	16 to 40 in	silty clay	slow	3.12 to 3.84 in	6.1 to 7.3
BCg --	40 to 80 in	silty clay loam	slow	6.36 to 7.56 in	6.6 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J99A--Lakepark clay loam, 0 to 3 percent slopes, overwash

#### Lakepark, overwash

*Extent:* 75 to 95 percent of the unit

*Landform(s):* drainageways on moraines

*Slope gradient:* 0 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 2w

*Hydric soil:* no

*Hydrologic group:* B/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>
Ap -- 0 to 8 in	clay loam	moderate	1.34 to 1.50 in	6.1 to 7.3
A -- 8 to 40 in	clay loam	moderate	5.49 to 6.13 in	6.1 to 7.3
Bg -- 40 to 60 in	clay loam	moderate	2.95 to 3.74 in	6.6 to 7.3
Cg -- 60 to 80 in	loam	moderately slow	3.01 to 3.81 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J100D2--Buse, eroded-Wilno complex, 12 to 18 percent slopes

#### Buse, moderately eroded

*Extent:* 60 to 80 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 4e

*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>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2 -- 8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C -- 40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

#### Wilno

*Extent:* 10 to 20 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 4e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB -- 42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2 -- 52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3

## Map Unit Description (MN)

Lincoln County, Minnesota

### J101B--Hokans-Svea complex, 1 to 4 percent slopes

#### Hokans

*Extent:* 60 to 80 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 1 to 4 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 15 in	loam	moderate	2.99 to 3.29 in	6.1 to 7.3
Bw -- 15 to 22 in	loam	moderate	1.20 to 1.35 in	6.1 to 7.3
Bk -- 22 to 40 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C -- 40 to 80 in	loam	moderately slow	5.96 to 7.56 in	7.4 to 8.4

#### Svea

*Extent:* 15 to 25 percent of the unit

*Landform(s):* swales on moraines, flats on moraines

*Slope gradient:* 1 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*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>
Ap,A -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	6.1 to 7.3
Bw -- 10 to 21 in	loam	moderate	1.87 to 2.09 in	6.6 to 7.3
Bk -- 21 to 36 in	clay loam	moderate	2.24 to 2.84 in	7.4 to 8.4
C -- 36 to 60 in	loam	moderately slow	3.60 to 4.56 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J102A--Oak Lake silty clay loam, 1 to 3 percent slopes

#### Oak Lake

*Extent:* 70 to 90 percent of the unit

*Landform(s):* swales on till plains, flats on till plains

*Slope gradient:* 1 to 3 percent

*Parent material:* lacustrine deposits over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 1

*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>
Ap -- 0 to 8 in	silty clay loam	moderate	1.42 to 1.73 in	6.1 to 7.3
AB -- 8 to 16 in	silty clay loam	moderate	1.49 to 1.82 in	6.1 to 7.3
Bw -- 16 to 22 in	silty clay loam	moderate	0.94 to 1.12 in	6.6 to 7.3
Bk -- 22 to 30 in	silty clay loam	moderate	1.26 to 1.50 in	7.4 to 8.4
2C -- 30 to 80 in	clay loam	moderately slow	7.00 to 9.00 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J103A--Winger silty clay loam, 0 to 2 percent slopes

#### Winger

*Extent:* 70 to 90 percent of the unit

*Landform(s):* rims on depressions on lake plains, flats on lake plains, drainageways on lake plains

*Slope gradient:* 0 to 2 percent

*Parent material:* lacustrine deposits over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer):* .32

*Land capability, nonirrigated:* 2w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	silty clay loam	moderate	1.28 to 1.56 in	7.4 to 8.4
Ak -- 7 to 22 in	silt loam	moderate	3.29 to 3.59 in	7.4 to 8.4
Bkg -- 22 to 27 in	silt loam	moderate	1.02 to 1.13 in	7.4 to 8.4
Cg1 -- 27 to 31 in	silt loam	moderate	0.79 to 0.87 in	7.4 to 8.4
2Cg2 -- 31 to 80 in	loam	moderately slow	7.32 to 9.28 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J104A--Svea loam, 1 to 3 percent slopes

#### Svea

*Extent:* 65 to 85 percent of the unit

*Landform(s):* swales on moraines, flats on moraines

*Slope gradient:* 1 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*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>
Ap,A -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	6.1 to 7.3
Bw -- 10 to 21 in	loam	moderate	1.87 to 2.09 in	6.6 to 7.3
Bk -- 21 to 36 in	clay loam	moderate	2.24 to 2.84 in	7.4 to 8.4
C -- 36 to 60 in	loam	moderately slow	3.60 to 4.56 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J105A--Arvilla sandy loam, 0 to 2 percent slopes

#### Arvilla

*Extent:* 75 to 95 percent of the unit

*Landform(s):* flats on outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .15

*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>
Ap -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw -- 9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk -- 14 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C -- 48 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J106B--Barnes-Buse-Svea complex, 1 to 6 percent slopes

#### Barnes, occasional saturation

*Extent:* 50 to 70 percent of the unit

*Landform(s):* hills on moraines, hills on till plains

*Slope gradient:* 3 to 6 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 11 in	loam	moderate	2.20 to 2.43 in	6.1 to 7.3
Bw -- 11 to 26 in	loam	moderate	2.54 to 2.84 in	6.1 to 7.3
Bk -- 26 to 44 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C -- 44 to 80 in	loam	moderately slow	5.37 to 6.81 in	7.4 to 8.4

#### Buse

*Extent:* 10 to 20 percent of the unit

*Landform(s):* hills on moraines, hills on till plains

*Slope gradient:* 3 to 6 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2 -- 8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C -- 40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J106B--Barnes-Buse-Svea complex, 1 to 6 percent slopes

#### Svea

*Extent:* 10 to 20 percent of the unit

*Landform(s):* swales on moraines, flats on moraines, swales on till plains, flats on till plains

*Slope gradient:* 1 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* moderate

*Representative soil profile:*

		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A --	0 to 10 in	loam	moderate	1.97 to 2.17 in	6.1 to 7.3
Bw --	10 to 21 in	loam	moderate	1.87 to 2.09 in	6.6 to 7.3
Bk --	21 to 36 in	clay loam	moderate	2.24 to 2.84 in	7.4 to 8.4
C --	36 to 60 in	loam	moderately slow	3.60 to 4.56 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J107A--Lakepark-Roliss-Parnell, depressional, complex, 0 to 3 percent slopes

#### Lakepark

*Extent:* 30 to 40 percent of the unit

*Landform(s):* drainageways on moraines

*Slope gradient:* 0 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/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>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
A -- 8 to 27 in	loam	moderate	3.86 to 4.24 in	6.1 to 7.3
Bg -- 27 to 41 in	loam	moderate	2.34 to 2.62 in	6.6 to 7.3
Cg -- 41 to 80 in	loam	moderately slow	5.85 to 7.41 in	7.4 to 8.4

#### Roliss

*Extent:* 20 to 30 percent of the unit

*Landform(s):* drainageways on moraines, flats on moraines, rims on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* 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>
Ap -- 0 to 9 in	loam	moderate	1.36 to 1.72 in	7.4 to 8.4
A -- 9 to 14 in	clay loam	moderate	0.87 to 0.97 in	7.4 to 8.4
Bg -- 14 to 20 in	clay loam	moderate	1.00 to 1.12 in	7.4 to 8.4
Cg -- 20 to 80 in	loam	moderately slow	8.98 to 11.37 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J107A--Lakepark-Roliss-Parnell, depressional, complex, 0 to 3 percent slopes

#### Parnell, depressional

*Extent:* 10 to 20 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 3w

*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>
A1,A2 -- 0 to 22 in	silty clay loam	moderately slow	3.97 to 4.85 in	6.1 to 7.3
Btg -- 22 to 55 in	silty clay	slow	4.30 to 5.29 in	6.1 to 7.3
BCg -- 55 to 80 in	silty clay loam	slow	3.97 to 4.71 in	6.6 to 8.4

### J195B--Poinsett silty clay loam, 2 to 6 percent slopes

#### Poinsett, occasional saturation

*Extent:* 70 to 90 percent of the unit

*Landform(s):* hills on lake plains

*Slope gradient:* 2 to 6 percent

*Parent material:* lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*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>
Ap -- 0 to 8 in	silty clay loam	moderate	1.42 to 1.73 in	6.1 to 7.3
Bw -- 8 to 23 in	silty clay loam	moderate	2.39 to 2.84 in	6.1 to 7.3
Bk -- 23 to 62 in	silty clay loam	moderate	6.24 to 7.41 in	7.4 to 8.4
2C -- 62 to 80 in	clay loam	moderately slow	2.54 to 3.26 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J197B--Lake Benton sandy loam, 2 to 6 percent slopes

#### Lake Benton, occasional saturation

*Extent:* 65 to 85 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash over lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bw -- 10 to 21 in	sandy loam	moderately rapid	1.32 to 1.54 in	6.6 to 7.3
Bk -- 21 to 25 in	sandy loam	moderately rapid	0.52 to 0.61 in	7.4 to 8.4
C -- 25 to 42 in	sand	rapid	0.85 to 1.19 in	7.4 to 8.4
2C -- 42 to 80 in	silt loam	moderate	6.43 to 7.56 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J197C--Lake Benton sandy loam, 6 to 12 percent slopes

#### Lake Benton

*Extent:* 65 to 85 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* outwash over lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 4e

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bw -- 10 to 21 in	sandy loam	moderately rapid	1.32 to 1.54 in	6.6 to 7.3
Bk -- 21 to 25 in	sandy loam	moderately rapid	0.52 to 0.61 in	7.4 to 8.4
C -- 25 to 42 in	sand	rapid	0.85 to 1.19 in	7.4 to 8.4
2C -- 42 to 80 in	silt loam	moderate	6.43 to 7.56 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J198C2--Rusklyn-Poinsett complex, 6 to 12 percent slopes, moderately eroded

#### Rusklyn, moderately eroded

*Extent:* 40 to 50 percent of the unit

*Landform(s):* hills on lake plains

*Slope gradient:* 6 to 12 percent

*Parent material:* lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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>
Ap -- 0 to 9 in	silty clay loam	moderate	1.63 to 1.99 in	7.4 to 8.4
Bk -- 9 to 28 in	silty clay loam	moderate	3.02 to 3.59 in	7.4 to 8.4
C1 -- 28 to 53 in	silty clay loam	moderate	4.03 to 4.79 in	7.4 to 8.4
2C2 -- 53 to 80 in	clay loam	moderately slow	3.75 to 4.82 in	7.4 to 8.4

#### Poinsett, moderately eroded

*Extent:* 35 to 45 percent of the unit

*Landform(s):* hills on lake plains

*Slope gradient:* 6 to 12 percent

*Parent material:* lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*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>
Ap -- 0 to 8 in	silty clay loam	moderate	1.42 to 1.73 in	6.1 to 7.3
Bw -- 8 to 23 in	silty clay loam	moderate	2.39 to 2.84 in	6.1 to 7.3
Bk -- 23 to 62 in	silty clay loam	moderate	6.24 to 7.41 in	7.4 to 8.4
2C -- 62 to 80 in	clay loam	moderately slow	2.54 to 3.26 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J199A--Fulda silty clay, 0 to 2 percent slopes

#### Fulda

*Extent:* 75 to 95 percent of the unit

*Landform(s):* flats on moraines, drainageways on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2w

*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>
Ap,A -- 0 to 13 in	silty clay	slow	1.69 to 2.21 in	6.1 to 7.3
Bg -- 13 to 33 in	silty clay	slow	2.01 to 3.81 in	6.6 to 7.3
Bkg -- 33 to 40 in	silty clay	slow	0.71 to 1.35 in	7.4 to 8.4
Cg -- 40 to 60 in	silty clay	slow	1.97 to 3.74 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J227D2--Buse, moderately eroded-Sandberg complex, 12 to 18 percent slopes

#### Buse, moderately eroded

*Extent:* 40 to 60 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 4e

*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>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2 -- 8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C -- 40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

#### Sandberg

*Extent:* 20 to 40 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*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>
A1,A2 -- 0 to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk -- 12 to 28 in	gravelly sand	very rapid	0.32 to 0.97 in	7.4 to 8.4
C -- 28 to 80 in	gravelly sand	very rapid	1.04 to 3.12 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J227F--Buse-Sandberg complex, 18 to 40 percent slopes

#### Buse

*Extent:* 40 to 60 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 18 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk -- 8 to 37 in	loam	moderate	4.37 to 5.54 in	7.4 to 8.4
C -- 37 to 80 in	loam	moderately slow	6.44 to 8.15 in	7.4 to 8.4

#### Sandberg

*Extent:* 20 to 40 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 18 to 40 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*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>
A1,A2 -- 0 to 12 in	sandy loam	very rapid	1.54 to 1.77 in	6.1 to 7.8
Bk -- 12 to 28 in	gravelly sand	very rapid	0.32 to 0.97 in	7.4 to 8.4
C -- 28 to 80 in	gravelly sand	very rapid	1.04 to 3.12 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J232B--Barnes-Buse-Arvilla complex, 2 to 6 percent slopes

#### Barnes, occasional saturation

*Extent:* 30 to 40 percent of the unit

*Landform(s):* hills on moraines, hills on till plains

*Slope gradient:* 2 to 6 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 11 in	loam	moderate	2.20 to 2.43 in	6.1 to 7.3
Bw -- 11 to 26 in	loam	moderate	2.54 to 2.84 in	6.1 to 7.3
Bk -- 26 to 44 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C -- 44 to 80 in	loam	moderately slow	5.37 to 6.81 in	7.4 to 8.4

#### Buse

*Extent:* 25 to 35 percent of the unit

*Landform(s):* hills on moraines, hills on till plains

*Slope gradient:* 3 to 6 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2 -- 8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C -- 40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J232B--Barnes-Buse-Arville complex, 2 to 6 percent slopes

#### Arville

*Extent:* 20 to 30 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .15

*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>
Ap -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw -- 9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk -- 14 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C -- 48 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J235C2--Buse-Barnes-Arvilla complex, 6 to 12 percent slopes, moderately eroded

#### Buse, moderately eroded

*Extent:* 30 to 40 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	7.4 to 8.4
Bk1,Bk2 -- 8 to 40 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4
C -- 40 to 60 in	loam	moderately slow	2.95 to 3.74 in	7.4 to 8.4

#### Barnes, moderately eroded

*Extent:* 25 to 35 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*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>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	6.1 to 7.3
Bw1,Bw2 -- 7 to 19 in	loam	moderate	2.01 to 2.24 in	6.1 to 7.3
Bk -- 19 to 37 in	loam	moderate	2.72 to 3.44 in	7.4 to 8.4
C -- 37 to 60 in	loam	moderately slow	3.43 to 4.34 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J235C2--Buse-Barnes-Arvilla complex, 6 to 12 percent slopes, moderately eroded

#### Arvilla

*Extent:* 20 to 30 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .15

*Land capability, nonirrigated* 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>
Ap -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw -- 9 to 14 in	sandy loam	moderately rapid	0.61 to 0.72 in	6.6 to 7.3
2Bk -- 14 to 48 in	gravelly sand	very rapid	0.68 to 1.69 in	7.4 to 8.4
2C -- 48 to 80 in	gravelly sand	very rapid	0.64 to 1.59 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J236A--Highpoint Lake silty clay, 0 to 2 percent slopes

#### Highpoint Lake

*Extent:* 80 to 95 percent of the unit

*Landform(s):* flats on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2s

*Hydric soil:* no

*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>
Ap,A -- 0 to 18 in	silty clay	slow	2.35 to 3.08 in	6.1 to 7.3
Bw -- 18 to 25 in	silty clay	slow	0.71 to 1.35 in	6.6 to 7.3
Bk -- 25 to 53 in	silty clay loam	slow	2.80 to 5.31 in	7.4 to 8.4
C -- 53 to 80 in	silty clay loam	slow	2.68 to 5.09 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J237A--Brensall-Tress complex, 0 to 2 percent slopes

#### Brensall

*Extent:* 60 to 80 percent of the unit

*Landform(s):* flats on till plains

*Slope gradient:* 1 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*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>
Ap -- 0 to 8 in	clay loam	moderately slow	1.34 to 1.50 in	6.1 to 7.3
Bt -- 8 to 15 in	clay loam	moderately slow	1.06 to 1.35 in	6.6 to 7.3
Bk -- 15 to 48 in	clay loam	moderately slow	4.63 to 5.29 in	7.4 to 8.4
BC -- 48 to 80 in	clay loam	moderately slow	4.46 to 5.10 in	7.4 to 8.4

#### Tress

*Extent:* 15 to 25 percent of the unit

*Landform(s):* swales on till plains

*Slope gradient:* 0 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*Hydric soil:* no

*Hydrologic group:* C/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>
Ap,A -- 0 to 20 in	clay loam	moderately slow	3.41 to 3.81 in	6.1 to 7.3
Bt -- 20 to 36 in	clay loam	moderately slow	2.36 to 2.99 in	6.6 to 7.3
Bk -- 36 to 48 in	clay loam	moderately slow	1.71 to 1.95 in	7.4 to 8.4
BC -- 48 to 80 in	clay loam	moderately slow	4.46 to 5.10 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J237B--Brensall-Tress complex, 1 to 4 percent slopes

#### Brensall

*Extent:* 50 to 70 percent of the unit

*Landform(s):* flats on till plains

*Slope gradient:* 1 to 4 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*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>
Ap -- 0 to 8 in	clay loam	moderately slow	1.34 to 1.50 in	6.1 to 7.3
Bt -- 8 to 15 in	clay loam	moderately slow	1.06 to 1.35 in	6.6 to 7.3
Bk -- 15 to 48 in	clay loam	moderately slow	4.63 to 5.29 in	7.4 to 8.4
BC -- 48 to 80 in	clay loam	moderately slow	4.46 to 5.10 in	7.4 to 8.4

#### Tress

*Extent:* 20 to 30 percent of the unit

*Landform(s):* swales on till plains

*Slope gradient:* 1 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*Hydric soil:* no

*Hydrologic group:* C/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>
Ap,A -- 0 to 20 in	clay loam	moderately slow	3.41 to 3.81 in	6.1 to 7.3
Bt -- 20 to 36 in	clay loam	moderately slow	2.36 to 2.99 in	6.6 to 7.3
Bk -- 36 to 48 in	clay loam	moderately slow	1.71 to 1.95 in	7.4 to 8.4
BC -- 48 to 80 in	clay loam	moderately slow	4.46 to 5.10 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J238D2--Buse, firm till-Wilno complex, 12 to 18 percent slopes

#### Buse, firm till, moderately eroded

*Extent:* 50 to 70 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 12 to 18 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .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>
Ap -- 0 to 9 in	clay loam	moderately slow	1.54 to 1.72 in	7.4 to 8.4
Bk -- 9 to 34 in	clay loam	moderately slow	3.47 to 3.97 in	7.4 to 8.4
BC -- 34 to 80 in	clay loam	moderately slow	6.45 to 7.37 in	7.4 to 8.4

#### Wilno

*Extent:* 15 to 25 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 12 to 18 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 4e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB -- 42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2 -- 52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3

## Map Unit Description (MN)

Lincoln County, Minnesota

### J238E--Buse, firm till-Wilno complex, 18 to 25 percent slopes

#### Buse, firm till

*Extent:* 65 to 85 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 18 to 25 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .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>
Ap -- 0 to 9 in	clay loam	moderately slow	1.54 to 1.72 in	7.4 to 8.4
Bk -- 9 to 34 in	clay loam	moderately slow	3.47 to 3.97 in	7.4 to 8.4
BC -- 34 to 80 in	clay loam	moderately slow	6.45 to 7.37 in	7.4 to 8.4

#### Wilno

*Extent:* 10 to 20 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 18 to 25 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 6e

*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>
Ap,A -- 0 to 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB -- 42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2 -- 52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3

## Map Unit Description (MN)

Lincoln County, Minnesota

### J238F--Buse, firm till-Wilno complex, 25 to 40 percent slopes

#### Buse, firm till

*Extent:* 65 to 85 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 25 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*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>
Ap -- 0 to 9 in	clay loam	moderately slow	1.54 to 1.72 in	7.4 to 8.4
Bk -- 9 to 34 in	clay loam	moderately slow	3.47 to 3.97 in	7.4 to 8.4
BC -- 34 to 80 in	clay loam	moderately slow	6.45 to 7.37 in	7.4 to 8.4

#### Wilno

*Extent:* 10 to 20 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 25 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*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>
Ap,A -- 0 to 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB -- 42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2 -- 52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3

## Map Unit Description (MN)

Lincoln County, Minnesota

### J240B--Forman-Aastad complex, 3 to 6 percent slopes

#### Forman, occasional saturation

*Extent:* 40 to 60 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 3 to 6 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .20

*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>
Ap -- 0 to 8 in	clay loam	moderately slow	1.34 to 1.50 in	6.6 to 7.3
Bt1 -- 8 to 14 in	clay loam	moderately slow	0.94 to 1.20 in	6.6 to 7.3
Bt2 -- 14 to 17 in	clay loam	moderately slow	0.41 to 0.52 in	6.6 to 7.3
Bk -- 17 to 44 in	clay loam	moderately slow	3.80 to 4.35 in	7.4 to 8.4
Bky -- 44 to 60 in	clay loam	moderately slow	2.20 to 2.52 in	7.4 to 8.4

#### Aastad

*Extent:* 15 to 25 percent of the unit

*Landform(s):* swales on till plains

*Slope gradient:* 1 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*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>
Ap,A1,A2 -- 0 to 19 in	clay loam	moderately slow	3.21 to 3.59 in	6.1 to 7.3
Bw -- 19 to 32 in	clay loam	moderately slow	1.95 to 2.47 in	6.6 to 7.3
Bk -- 32 to 46 in	clay loam	moderately slow	1.98 to 2.27 in	7.4 to 8.4
BC -- 46 to 60 in	clay loam	moderately slow	1.93 to 2.20 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J242F--Buse, firm till-Wilno-Lamoure, frequently flooded complex, 0 to 40 percent slopes

#### Buse, firm till

*Extent:* 55 to 75 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 12 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*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>
Ap -- 0 to 9 in	clay loam	moderately slow	1.54 to 1.72 in	7.4 to 8.4
Bk -- 9 to 34 in	clay loam	moderately slow	3.47 to 3.97 in	7.4 to 8.4
C -- 34 to 80 in	clay loam	moderately slow	6.45 to 7.37 in	7.4 to 8.4

#### Wilno

*Extent:* 10 to 20 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 40 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*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>
Ap,A -- 0 to 42 in	loam	moderate	8.43 to 9.27 in	6.1 to 7.3
AB -- 42 to 52 in	loam	moderate	1.67 to 1.87 in	6.1 to 7.3
Bw1,Bw2 -- 52 to 80 in	loam	moderate	4.75 to 5.31 in	6.1 to 7.3

## Map Unit Description (MN)

Lincoln County, Minnesota

### J242F--Buse, firm till-Wilno-Lamoure, frequently flooded complex, 0 to 40 percent slopes

#### Lamoure, frequently flooded

*Extent:* 10 to 20 percent of the unit

*Landform(s):* flats 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:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 5w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1,A2 -- 0 to 27 in	silty clay loam	moderate	4.89 to 5.98 in	7.4 to 8.4
Cg1 -- 27 to 34 in	silty clay loam	moderate	1.07 to 1.27 in	7.4 to 8.4
Cg2 -- 34 to 60 in	silt loam	moderate	5.20 to 5.72 in	7.4 to 8.4

### J243A--Balaton clay loam, 1 to 3 percent slopes

#### Balaton

*Extent:* 85 to 95 percent of the unit

*Landform(s):* knolls on till plains

*Slope gradient:* 1 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2s

*Hydric soil:* no

*Hydrologic group:* 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>
Ap -- 0 to 10 in	clay loam	moderately slow	1.67 to 1.87 in	7.4 to 8.4
Bk -- 10 to 28 in	clay loam	moderately slow	2.54 to 2.90 in	7.4 to 8.4
BC -- 28 to 60 in	clay loam	moderately slow	4.46 to 5.10 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J250C2--Forman-Buse complex, 6 to 12 percent slopes, moderately eroded

#### Forman, moderately eroded

*Extent:* 40 to 50 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*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>
Ap -- 0 to 8 in	clay loam	moderately slow	1.34 to 1.50 in	6.6 to 7.3
Bt1 -- 8 to 14 in	clay loam	moderately slow	0.94 to 1.20 in	6.6 to 7.3
Bt2 -- 14 to 17 in	clay loam	moderately slow	0.41 to 0.52 in	6.6 to 7.3
Bk -- 17 to 44 in	clay loam	moderately slow	3.80 to 4.35 in	7.4 to 8.4
Bky -- 44 to 60 in	clay loam	moderately slow	2.20 to 2.52 in	7.4 to 8.4

#### Buse, moderately eroded, firm till

*Extent:* 35 to 45 percent of the unit

*Landform(s):* hills on till plains

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .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>
Ap -- 0 to 9 in	clay loam	moderately slow	1.54 to 1.72 in	7.4 to 8.4
Bk -- 9 to 34 in	clay loam	moderately slow	3.47 to 3.97 in	7.4 to 8.4
BC -- 34 to 80 in	clay loam	moderately slow	6.45 to 7.37 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### J251A--Parnell silty clay loam, firm till, 0 to 2 percent slopes

#### Parnell, firm till

*Extent:* 70 to 80 percent of the unit

*Landform(s):* drainageways on till plains

*Slope gradient:* 0 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 2w

*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>
Ap,A -- 0 to 25 in	silty clay loam	moderately slow	4.54 to 5.54 in	6.1 to 7.3
Btg -- 25 to 44 in	silty clay	slow	2.46 to 3.02 in	6.1 to 7.3
Bkg -- 44 to 62 in	clay loam	moderately slow	2.48 to 2.83 in	7.4 to 8.4
BCg -- 62 to 80 in	clay loam	moderately slow	2.54 to 2.90 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L73A--Blue Earth mucky silty clay loam, depressional, 0 to 1 percent slopes

#### Blue Earth, depressional

*Extent:* 70 to 90 percent of the unit

*Landform(s):* depressions on lake plains, depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* coprogenic material

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* B/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>
Ap -- 0 to 10 in	silty clay loam	moderate	1.77 to 2.36 in	7.4 to 8.4
Cg -- 10 to 68 in	silty clay loam	moderate	10.42 to 13.89 in	7.4 to 8.4
2Cg -- 68 to 80 in	loam	moderate	1.83 to 2.32 in	7.4 to 8.4

### L78A--Canisteo clay loam, 0 to 2 percent slopes

#### Canisteo

*Extent:* 55 to 85 percent of the unit

*Landform(s):* rims on depressions on moraines, flats on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 18 in	clay loam	moderate	3.26 to 3.98 in	7.4 to 8.4
Bkg -- 18 to 39 in	loam	moderate	2.50 to 3.76 in	7.4 to 8.4
Cg -- 39 to 80 in	loam	moderate	6.14 to 7.78 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L83A--Webster clay loam, 0 to 2 percent slopes

#### Webster

*Extent:* 50 to 85 percent of the unit

*Landform(s):* flats on moraines, swales on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 19 in	clay loam	moderate	3.59 to 3.97 in	6.6 to 7.3
Bg -- 19 to 26 in	clay loam	moderate	1.13 to 1.28 in	6.6 to 7.8
BCg,Cg -- 26 to 60 in	loam	moderate	5.08 to 6.43 in	7.4 to 8.4

### L84A--Glencoe clay loam, depressional, 0 to 1 percent slopes

#### Glencoe, depressional

*Extent:* 75 to 100 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 24 in	clay loam	moderate	4.32 to 5.28 in	6.1 to 7.8
ABg -- 24 to 35 in	clay loam	moderate	1.98 to 2.43 in	6.1 to 7.8
Bg -- 35 to 48 in	loam	moderate	1.95 to 2.47 in	6.6 to 7.8
Cg -- 48 to 60 in	loam	moderate	1.77 to 2.24 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L96B--Estherville-Hawick complex, 2 to 6 percent slopes

#### Estherville

<p><i>Extent:</i> 40 to 65 percent of the unit</p> <p><i>Landform(s):</i> hills on outwash plains, hills on stream terraces</p> <p><i>Slope gradient:</i> 2 to 6 percent</p> <p><i>Parent material:</i> sandy 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> 2</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> .20</p> <p><i>Land capability, nonirrigated</i> 3s</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>
Ap,A -- 0 to 13 in	sandy loam	moderately rapid	1.69 to 2.34 in	5.6 to 7.3
Bw1 -- 13 to 18 in	sandy loam	moderately rapid	0.61 to 0.85 in	5.6 to 7.3
2Bw2 -- 18 to 23 in	loamy coarse sand	rapid	0.10 to 0.20 in	5.6 to 7.3
2C -- 23 to 60 in	gravelly coarse sand	rapid	0.74 to 1.48 in	6.6 to 8.4

#### Hawick

<p><i>Extent:</i> 25 to 40 percent of the unit</p> <p><i>Landform(s):</i> hills on outwash plains, hills on stream terraces</p> <p><i>Slope gradient:</i> 2 to 6 percent</p> <p><i>Parent material:</i> sandy 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> excessively drained</p>	<p><i>Soil loss tolerance (T factor):</i> 5</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> .20</p> <p><i>Land capability, nonirrigated</i> 4s</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>
Ap -- 0 to 7 in	sandy loam	moderately rapid	0.92 to 1.06 in	6.1 to 7.8
Bw -- 7 to 11 in	gravelly loamy coarse sand	rapid	0.12 to 0.39 in	6.1 to 7.8
C -- 11 to 80 in	gravelly coarse sand	very rapid	1.38 to 4.13 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L129B--Terril loam, 2 to 6 percent slopes

#### Terril

*Extent:* 80 to 95 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* colluvium over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A1 -- 0 to 27 in	loam	moderate	5.43 to 5.98 in	6.1 to 7.3
A2,BA -- 27 to 40 in	loam	moderate	2.21 to 2.47 in	6.1 to 7.3
Bw -- 40 to 63 in	loam	moderate	3.65 to 4.11 in	6.1 to 7.3
C -- 63 to 80 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L139A--Wadena loam, 0 to 2 percent slopes

#### Wadena

<i>Extent:</i> 80 to 90 percent of the unit	<i>Soil loss tolerance (T factor):</i> 3
<i>Landform(s):</i> flats on outwash plains, rises on outwash plains, flats on stream terraces, rises on stream terraces	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 0 to 2 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> loamy sediments over outwash	<i>Kw factor (surface layer)</i> .24
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2s
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> B
<i>Drainage class:</i> well drained	<i>Potential for frost action:</i> low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 13 in	loam	moderate	2.60 to 2.86 in	6.1 to 7.3
Bw1 -- 13 to 20 in	loam	moderate	0.99 to 1.35 in	5.6 to 7.3
Bw2 -- 20 to 30 in	sandy loam	moderately rapid	1.28 to 1.77 in	5.6 to 7.3
2C -- 30 to 60 in	gravelly coarse sand	rapid	0.60 to 1.20 in	6.6 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L139B--Wadena loam, 2 to 6 percent slopes

#### Wadena

*Extent:* 80 to 90 percent of the unit

*Landform(s):* hills on outwash plains, hills on terraces

*Slope gradient:* 2 to 6 percent

*Parent material:* loamy sediments over outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 13 in	loam	moderate	2.60 to 2.86 in	6.1 to 7.3
Bw1 -- 13 to 20 in	loam	moderate	0.99 to 1.35 in	5.6 to 7.3
Bw2 -- 20 to 30 in	sandy loam	moderately rapid	1.28 to 1.77 in	5.6 to 7.3
2C -- 30 to 60 in	gravelly coarse sand	rapid	0.60 to 1.20 in	6.6 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L201A--Normania loam, 0 to 3 percent slopes

#### Normania

*Extent:* 75 to 90 percent of the unit

*Landform(s):* flats on moraines, rises on moraines

*Slope gradient:* 0 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 1

*Hydric soil:* no

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A,AB -- 0 to 17 in	loam	moderate	3.39 to 3.72 in	6.1 to 7.3
Bw -- 17 to 26 in	loam	moderate	1.36 to 1.72 in	6.6 to 7.3
Bk -- 26 to 50 in	loam	moderate	3.60 to 4.56 in	7.4 to 8.4
Cg -- 50 to 60 in	loam	moderate	1.48 to 1.87 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L211B--Amiret-Round Lake-Swanlake complex, 2 to 6 percent slopes

#### Amiret

*Extent:* 20 to 45 percent of the unit

*Landform(s):* moraines on hills

*Slope gradient:* 2 to 5 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*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>
Ap,A -- 0 to 12 in	loam	moderate	2.01 to 2.60 in	6.1 to 7.3
Bw -- 12 to 20 in	loam	moderate	1.24 to 1.57 in	6.1 to 7.3
Bk -- 20 to 50 in	loam	moderate	4.49 to 5.69 in	7.4 to 8.4
BC -- 50 to 67 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4
C -- 67 to 80 in	loam	moderate	1.95 to 2.47 in	7.4 to 8.4

#### Round Lake

*Extent:* 20 to 40 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash over till or lacustrine silty sediments

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 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>
Ap -- 0 to 11 in	sandy loam	moderately rapid	1.43 to 1.98 in	5.6 to 7.3
Bw -- 11 to 14 in	sandy loam	moderately rapid	0.41 to 0.57 in	5.6 to 7.3
2Bw -- 14 to 26 in	loamy coarse sand	rapid	0.24 to 0.47 in	5.6 to 7.3
2Bk -- 26 to 35 in	gravelly coarse sand	rapid	0.18 to 0.36 in	6.6 to 8.4
2C -- 35 to 48 in	coarse sand	rapid	0.26 to 0.52 in	6.6 to 8.4
3Cg -- 48 to 80 in	silt loam	moderate	5.10 to 7.02 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L211B--Amiret-Round Lake-Swanlake complex, 2 to 6 percent slopes

#### Swanlake

*Extent:* 15 to 30 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 3 to 6 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loam	moderate	1.81 to 2.17 in	7.4 to 8.4
Bk -- 9 to 43 in	loam	moderate	5.08 to 6.43 in	7.4 to 8.4
C -- 43 to 60 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L212A--Burr-Nishna complex, 0 to 2 percent slopes, occasionally flooded

#### Burr, occasionally flooded

*Extent:* 50 to 80 percent of the unit

*Landform(s):* flats on lake plains

*Slope gradient:* 0 to 2 percent

*Parent material:* lacustrine sediments

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

*Flooding:* occasional

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*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>
Apy -- 0 to 7 in	silty clay loam	moderate	1.28 to 1.56 in	7.4 to 8.4
A1ky,A2y -- 7 to 25 in	silty clay loam	moderately slow	2.54 to 3.08 in	7.4 to 8.4
A3,A4 -- 25 to 35 in	silty clay	moderately slow	1.38 to 1.67 in	7.4 to 8.4
Cg -- 35 to 60 in	stratified silt loam to clay	moderately slow	2.23 to 3.22 in	7.4 to 8.4

#### Nishna, occasionally flooded

*Extent:* 20 to 55 percent of the unit

*Landform(s):* flood plains, flats on lake plains

*Slope gradient:* 0 to 1 percent

*Parent material:* alluvium

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

*Flooding:* occasional

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* C/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>
Ap,A,Bg -- 0 to 48 in	silty clay	slow	6.72 to 8.17 in	7.4 to 8.4
Cg -- 48 to 60 in	silty clay loam	slow	1.89 to 2.24 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L213A--Calco silty clay loam, 0 to 2 percent slopes, frequently flooded

#### Calco, frequently flooded

*Extent:* 75 to 90 percent of the unit

*Landform(s):* flats 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:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 5w

*Hydric soil:* yes

*Hydrologic group:* B/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 22 in	silty clay loam	moderate	4.63 to 5.07 in	7.4 to 8.4
Bg -- 22 to 50 in	silty clay loam	moderate	5.87 to 6.43 in	7.4 to 8.4
Cg -- 50 to 80 in	silty clay loam	moderate	5.39 to 5.98 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L214A--Calco-Du Page complex, 0 to 2 percent slopes, frequently flooded

#### Calco, frequently flooded

*Extent:* 40 to 70 percent of the unit

*Landform(s):* flats 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:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 5w

*Hydric soil:* yes

*Hydrologic group:* B/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>
Ap,A1 -- 0 to 14 in	silty clay loam	moderate	2.98 to 3.26 in	7.4 to 8.4
A2 -- 14 to 40 in	silty clay loam	moderate	5.46 to 5.98 in	7.4 to 8.4
Cg -- 40 to 60 in	silty clay loam	moderate	3.54 to 3.94 in	7.4 to 8.4

#### Du Page, frequently flooded

*Extent:* 40 to 60 percent of the unit

*Landform(s):* flats on flood plains, rises 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:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 5w

*Hydric soil:* yes

*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>
A1,A2 -- 0 to 36 in	loam	moderate	7.17 to 7.88 in	6.6 to 8.4
C1,C2 -- 36 to 60 in	loam	moderate	4.08 to 4.56 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L215B--Dickman sandy loam, 2 to 6 percent slopes

#### Dickman

*Extent:* 80 to 90 percent of the unit

*Landform(s):* outwash plains on hills

*Slope gradient:* 2 to 6 percent

*Parent material:* outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 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>
Ap,A -- 0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	6.1 to 6.5
Bw -- 12 to 19 in	sandy loam	moderately rapid	0.85 to 0.99 in	6.1 to 7.3
2Bw,C -- 19 to 80 in	coarse sand	rapid	3.05 to 4.27 in	6.1 to 7.8

## Map Unit Description (MN)

Lincoln County, Minnesota

### L216A--Du Page, rarely flooded-Wergeland complex, 0 to 3 percent slopes

#### Du Page, rarely flooded

*Extent:* 50 to 70 percent of the unit

*Landform(s):* flats on flood plains, rises on 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):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*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>
Ap,A1,A2 -- 0 to 36 in	loam	moderate	7.17 to 7.88 in	6.6 to 8.4
C1,C2 -- 36 to 60 in	loam	moderate	4.08 to 4.56 in	7.4 to 8.4

#### Wergeland

*Extent:* 30 to 50 percent of the unit

*Landform(s):* flats on lake plains, rises on lake plains

*Slope gradient:* 0 to 3 percent

*Parent material:* loamy and silty sediments

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

*Flooding:* none

*Ponding:* none

*Drainage class:* moderately well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2s

*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>
Ap,AB -- 0 to 13 in	loam	moderate	2.60 to 2.86 in	7.4 to 8.4
Bk -- 13 to 25 in	loam	moderate	2.07 to 2.32 in	7.4 to 8.4
Cg -- 25 to 43 in	stratified loam to silty clay loam	moderate	3.01 to 3.37 in	7.4 to 8.4
Ab -- 43 to 58 in	loam	moderate	2.99 to 3.29 in	7.4 to 8.4
C -- 58 to 66 in	stratified loam to silty clay loam	moderate	1.41 to 1.57 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L217C2--Ves-Storden complex, 6 to 12 percent slopes, moderately eroded

#### Ves, moderately eroded

*Extent:* 35 to 75 percent of the unit

*Landform(s):* moraines on hills

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw1,Bw2 -- 8 to 22 in	loam	moderate	2.13 to 2.69 in	6.6 to 7.3
Bk -- 22 to 33 in	loam	moderate	1.87 to 2.09 in	7.4 to 8.4
C -- 33 to 60 in	loam	moderate	4.55 to 5.09 in	7.4 to 8.4

#### Storden, moderately eroded

*Extent:* 30 to 65 percent of the unit

*Landform(s):* moraines on hills

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
Bk -- 7 to 55 in	loam	moderate	7.20 to 9.13 in	7.4 to 8.4
C -- 55 to 80 in	loam	moderate	3.72 to 4.71 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L218B--Amiret loam, 2 to 5 percent slopes

#### Amiret

*Extent:* 75 to 90 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 5 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*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>
Ap,A -- 0 to 12 in	loam	moderate	2.01 to 2.60 in	6.1 to 7.3
Bw -- 12 to 20 in	loam	moderate	1.24 to 1.57 in	6.1 to 7.3
Bk -- 20 to 50 in	loam	moderate	4.49 to 5.69 in	7.4 to 8.4
BC -- 50 to 67 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4
C -- 67 to 80 in	loam	moderate	1.95 to 2.47 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L220A--Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded

#### Calco, occasionally flooded

*Extent:* 75 to 90 percent of the unit

*Landform(s):* flats on flood plains

*Slope gradient:* 0 to 2 percent

*Parent material:* alluvium

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

*Flooding:* occasional

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/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>
Ap,A1 -- 0 to 14 in	silty clay loam	moderate	2.98 to 3.26 in	7.4 to 8.4
A2 -- 14 to 40 in	silty clay loam	moderate	5.46 to 5.98 in	7.4 to 8.4
Cg -- 40 to 60 in	silty clay loam	moderate	3.54 to 3.94 in	7.4 to 8.4

### L221A--Du Page loam, 0 to 2 percent slopes, occasionally flooded

#### Du Page, occasionally flooded

*Extent:* 75 to 90 percent of the unit

*Landform(s):* flats on flood plains, rises on 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):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*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>
Ap,A1,A2 -- 0 to 36 in	loam	moderate	7.17 to 7.88 in	6.6 to 8.4
C1,C2 -- 36 to 60 in	loam	moderate	4.08 to 4.56 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L222C2--Ves-Storden-Pilot Grove complex, 6 to 12 percent slopes, moderately eroded

#### Ves, moderately eroded

*Extent:* 25 to 40 percent of the unit

*Landform(s):* moraines on hills

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	6.1 to 7.3
Bw -- 8 to 22 in	loam	moderate	2.13 to 2.69 in	6.6 to 7.3
Bk -- 22 to 33 in	loam	moderate	1.87 to 2.09 in	7.4 to 8.4
C -- 33 to 60 in	loam	moderate	4.55 to 5.09 in	7.4 to 8.4

#### Storden, moderately eroded

*Extent:* 20 to 40 percent of the unit

*Landform(s):* moraines on hills

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .32

*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>
Ap -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	7.4 to 8.4
Bk -- 7 to 55 in	loam	moderate	7.20 to 9.13 in	7.4 to 8.4
C -- 55 to 80 in	loam	moderate	3.72 to 4.71 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L222C2--Ves-Storden-Pilot Grove complex, 6 to 12 percent slopes, moderately eroded

#### Pilot Grove

*Extent:* 15 to 35 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* outwash over till

*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):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*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>
Ap,A -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.63 in	5.6 to 7.3
Bw -- 9 to 17 in	sandy loam	moderately rapid	1.02 to 1.42 in	5.6 to 7.3
2BC -- 17 to 21 in	loamy sand	rapid	0.08 to 0.16 in	5.6 to 7.3
2C -- 21 to 58 in	gravelly coarse sand	rapid	0.74 to 1.48 in	6.6 to 8.4
3C -- 58 to 80 in	loam	moderate	3.31 to 4.19 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### L223B--Amiret-Swanlake complex, 2 to 6 percent slopes

#### Amiret

*Extent:* 15 to 60 percent of the unit

*Landform(s):* moraines on hills

*Slope gradient:* 2 to 5 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*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>
Ap,A -- 0 to 12 in	loam	moderate	2.01 to 2.60 in	6.1 to 7.3
Bw -- 12 to 20 in	loam	moderate	1.24 to 1.57 in	6.1 to 7.3
Bk -- 20 to 50 in	loam	moderate	4.49 to 5.69 in	7.4 to 8.4
BC -- 50 to 67 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4
C -- 67 to 80 in	loam	moderate	1.95 to 2.47 in	7.4 to 8.4

#### Swanlake

*Extent:* 15 to 40 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 3 to 6 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loam	moderate	1.81 to 2.17 in	7.4 to 8.4
Bk -- 9 to 43 in	loam	moderate	5.08 to 6.43 in	7.4 to 8.4
C -- 43 to 60 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4

## Map Unit Description (MN)

Lincoln County, Minnesota

### M-W--Water, miscellaneous

#### Water, miscellaneous

*Extent:* 100 percent of the unit

*Landform(s):*

*Slope gradient:*

*Parent material:*

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

*Flooding:*

*Ponding:*

*Drainage class:*

*Soil loss tolerance (T factor):*

*Wind erodibility group (WEG):*

*Wind erodibility index (WEI):*

*Kw factor (surface layer)*

*Land capability, nonirrigated*

*Hydric soil:*

*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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### 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.