

## Map Unit Description (MN)

Waseca 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:*

*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:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

#### Udipsamments

*Extent:* 15 to 30 percent of the unit

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

*Slope gradient:*

*Parent material:* sandy 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:*

*Representative soil profile:*

*Texture*

*Permeability*

*Available water  
capacity*

*pH*

## Map Unit Description (MN)

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### L5A--Delft, overwash-Delft complex, 1 to 4 percent slopes

#### Delft, overwash

<i>Extent:</i> 40 to 60 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> drainageways on moraines, swales on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 1 to 4 percent	<i>Wind erodibility index (WEI):</i> 48
<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> 2w
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> somewhat 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>
Ap -- 0 to 12 in	loam	moderately slow	2.13 to 2.36 in	5.6 to 7.8
A -- 12 to 37 in	loam	moderately slow	4.54 to 5.04 in	5.6 to 7.8
Bg -- 37 to 47 in	clay loam	moderate	1.87 to 2.17 in	6.6 to 7.8
Cg -- 47 to 80 in	loam	moderate	4.96 to 6.28 in	7.4 to 8.4

#### Delft

<i>Extent:</i> 30 to 55 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> drainageways on moraines, swales on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 1 to 3 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> till	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2w
<i>Flooding:</i> none	<i>Hydric soil:</i> yes
<i>Ponding:</i> none	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> 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>
Ap,A -- 0 to 37 in	loam	moderately slow	6.66 to 7.40 in	5.6 to 7.8
Bg -- 37 to 50 in	clay loam	moderate	2.47 to 2.86 in	6.6 to 7.8
Cg -- 50 to 60 in	loam	moderate	1.48 to 1.87 in	7.4 to 8.4

## Map Unit Description (MN)

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### L13A--Klossner muck, depressional, 0 to 1 percent slopes

#### Klossner, drained

*Extent:* 65 to 85 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material over loamy glaciofluvial deposits

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Op -- 0 to 10 in	muck	moderately rapid	3.44 to 4.72 in	
Oa -- 10 to 26 in	muck	moderately rapid	5.65 to 7.75 in	
2A1 -- 26 to 36 in	mucky silty clay loam	moderate	2.17 to 2.56 in	
2A2 -- 36 to 48 in	silty clay loam	moderate	2.20 to 2.69 in	
2Cg -- 48 to 80 in	loam	moderate	4.78 to 6.06 in	

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### L14A--Houghton muck, depressional, 0 to 1 percent slopes

#### Houghton, drained

*Extent:* 65 to 85 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oap -- 0 to 10 in	muck	moderately rapid	3.44 to 4.43 in	
Oa -- 10 to 80 in	muck	moderately rapid	24.53 to 31.54 in	

## Map Unit Description (MN)

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### L15A--Klossner, Okoboji, and Glencoe soils, ponded, 0 to 1 percent slopes

#### Klossner, ponded

<i>Extent:</i> 0 to 100 percent of the unit	<i>Soil loss tolerance (T factor):</i> 1
<i>Landform(s):</i> depressions on moraines	<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> herbaceous organic material over loamy glaciofluvial deposits	<i>Kw factor (surface layer)</i> .02
<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>
Oa -- 0 to 26 in	muck	moderately rapid	9.09 to 12.47 in	
2A1 -- 26 to 33 in	silt loam	moderate	1.56 to 1.84 in	
2A2 -- 33 to 40 in	loam	moderate	1.28 to 1.56 in	
2Cg -- 40 to 80 in	loam	moderate	5.96 to 7.56 in	

#### Glencoe, ponded

<i>Extent:</i> 0 to 100 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> moraines, -- error in exists on --	<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> loamy 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> 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>
A -- 0 to 42 in	silty clay loam	moderate	7.58 to 9.27 in	6.1 to 7.8
Bg -- 42 to 50 in	clay loam	moderate	1.18 to 1.50 in	6.6 to 7.8
Cg -- 50 to 60 in	loam	moderate	1.48 to 1.87 in	7.4 to 8.4

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### L15A--Klossner, Okoboji, and Glencoe soils, ponded, 0 to 1 percent slopes

#### Okoboji, ponded

*Extent:* 0 to 100 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* glaciolacustrine 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):* 8

*Wind erodibility index (WEI):* 0

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 8w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1 --	0 to 10 in	mucky silty clay loam	moderate	2.17 to 2.46 in	6.1 to 7.8
A2 --	10 to 52 in	silty clay loam	moderately slow	7.58 to 8.43 in	6.6 to 7.8
Bg --	52 to 60 in	silty clay loam	moderately slow	1.42 to 1.57 in	6.6 to 7.8

## Map Unit Description (MN)

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### L16A--Muskego, Blue Earth, and Houghton soils, ponded, 0 to 1 percent slopes

#### Houghton, ponded

<i>Extent:</i> 0 to 100 percent of the unit	<i>Soil loss tolerance (T factor):</i> 3
<i>Landform(s):</i> depressions on moraines	<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> herbaceous organic material	<i>Kw factor (surface layer)</i> .02
<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> A/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>
Oa -- 0 to 80 in	muck	moderately rapid	27.97 to 35.96 in	

#### Muskego, ponded

<i>Extent:</i> 0 to 100 percent of the unit	<i>Soil loss tolerance (T factor):</i> 1
<i>Landform(s):</i> depressions on moraines	<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> herbaceous organic material over coprogenic material	<i>Kw factor (surface layer)</i> .02
<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>
Oa1 -- 0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa2 -- 9 to 36 in	muck	moderately rapid	9.37 to 12.05 in	
Lco -- 36 to 60 in	coprogenous earth	slow	4.32 to 5.76 in	

## Map Unit Description (MN)

Waseca County, Minnesota

### L16A--Muskego, Blue Earth, and Houghton soils, ponded, 0 to 1 percent slopes

#### Blue Earth, ponded

<i>Extent:</i> 0 to 100 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> depressions on moraines	<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> coprogenic material	<i>Kw factor (surface layer)</i> .28
<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>
A -- 0 to 50 in	silt loam	moderate	9.00 to 12.00 in	7.4 to 8.4
Cg -- 50 to 60 in	silt loam	moderate	1.77 to 2.36 in	7.4 to 8.4

### L26B--Shorewood silty clay loam, 3 to 6 percent slopes

#### Shorewood

<i>Extent:</i> 85 to 95 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> lake plains, hills on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 3 to 6 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> clayey lacustrine deposits	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2e
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> moderately well 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>
Ap,A,AB -- 0 to 17 in	silty clay loam	moderately slow	3.05 to 3.72 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay	moderately slow	2.87 to 3.53 in	5.1 to 7.3
2BCg,2Cg -- 39 to 60 in	loam	moderate	3.13 to 3.96 in	7.4 to 8.4

## Map Unit Description (MN)

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### L36A--Hamel, overwash-Hamel complex, 1 to 4 percent slopes

#### Hamel, overwash

<i>Extent:</i> 40 to 60 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> drainageways on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 1 to 4 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> colluvium over till	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2w
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> somewhat 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>
Ap -- 0 to 13 in	loam	moderate	2.60 to 3.12 in	5.6 to 7.3
A -- 13 to 29 in	clay loam	moderate	3.23 to 3.87 in	5.6 to 7.3
Btg -- 29 to 50 in	clay loam	moderately slow	3.34 to 3.96 in	5.6 to 7.3
Cg -- 50 to 80 in	loam	moderate	4.49 to 5.69 in	7.4 to 8.4

#### Hamel

<i>Extent:</i> 30 to 55 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> drainageways on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 1 to 3 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> loamy colluvium over loamy till	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2w
<i>Flooding:</i> none	<i>Hydric soil:</i> yes
<i>Ponding:</i> none	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> 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>
Ap,A,AB -- 0 to 24 in	loam	moderate	4.80 to 5.76 in	5.6 to 7.3
Btg -- 24 to 46 in	clay loam	moderately slow	3.53 to 4.19 in	5.6 to 7.3
Cg -- 46 to 80 in	loam	moderate	5.08 to 6.43 in	7.4 to 8.4

## Map Unit Description (MN)

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### L40B--Angus-Kilkenny complex, 2 to 6 percent slopes

#### Angus

*Extent:* 35 to 55 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 5 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .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 -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	5.6 to 7.3
Bt -- 8 to 35 in	clay loam	moderate	4.07 to 5.16 in	5.1 to 7.3
BC -- 35 to 40 in	clay loam	moderate	0.72 to 0.97 in	6.1 to 7.8
C -- 40 to 80 in	loam	moderate	5.96 to 7.56 in	7.4 to 8.4

#### Kilkenny

*Extent:* 30 to 50 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* flow till 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)* .24

*Land capability, nonirrigated* 2e

*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 11 in	clay loam	moderately slow	1.87 to 2.09 in	5.6 to 7.3
Bt -- 11 to 35 in	clay loam	moderately slow	3.60 to 4.56 in	5.1 to 7.3
2Bk,2C -- 35 to 80 in	loam	moderate	6.73 to 8.53 in	7.4 to 8.4

## Map Unit Description (MN)

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### L41C2--Lester-Kilkenny complex, 6 to 12 percent slopes, eroded

#### Lester, eroded

*Extent:* 40 to 50 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bt -- 7 to 38 in	clay loam	moderate	4.67 to 5.91 in	5.1 to 7.3
Bk -- 38 to 60 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

#### Kilkenny, eroded

*Extent:* 35 to 45 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* flow till 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)* .24

*Land capability, nonirrigated* 3e

*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	clay loam	moderately slow	1.54 to 1.72 in	5.6 to 7.3
Bt -- 9 to 53 in	clay loam	moderately slow	6.61 to 8.38 in	5.1 to 7.3
2BC,2C -- 53 to 80 in	loam	moderate	4.02 to 5.09 in	7.4 to 8.4

## Map Unit Description (MN)

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### L41D2--Lester-Kilkenny complex, 12 to 18 percent slopes, eroded

#### Lester, eroded

*Extent:* 40 to 50 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 4e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bt -- 7 to 38 in	clay loam	moderate	4.67 to 5.91 in	5.1 to 7.3
Bk -- 38 to 60 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

#### Kilkenny, eroded

*Extent:* 25 to 45 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* flow till 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)* .24

*Land capability, nonirrigated* 4e

*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	clay loam	moderately slow	1.54 to 1.72 in	5.6 to 7.3
Bt -- 9 to 53 in	clay loam	moderately slow	6.61 to 8.38 in	5.1 to 7.3
2BC,2C -- 53 to 80 in	loam	moderate	4.02 to 5.09 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L41E--Lester-Kilkenny complex, 18 to 25 percent slopes

#### Lester

*Extent:* 40 to 50 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 18 to 25 percent

*Parent material:* loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 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 5 in	loam	moderate	1.02 to 1.13 in	5.6 to 7.3
BE,Bt -- 5 to 34 in	clay loam	moderate	4.31 to 5.46 in	5.1 to 7.3
Bk -- 34 to 60 in	loam	moderate	3.90 to 4.94 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

#### Kilkenny

*Extent:* 35 to 45 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 18 to 25 percent

*Parent material:* flow till 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)* .20

*Land capability, nonirrigated* 6e

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	clay loam	moderately slow	1.20 to 1.35 in	5.6 to 7.3
Bt -- 7 to 31 in	clay loam	moderately slow	3.60 to 4.56 in	5.1 to 7.3
2Bk,2C -- 31 to 80 in	loam	moderate	7.32 to 9.28 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L48A--Derrynane, overwash-Derrynane complex, 1 to 4 percent slopes

#### Derrynane, overwash

<i>Extent:</i> 40 to 60 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> drainageways on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 1 to 4 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> colluvium over till	<i>Kw factor (surface layer)</i> .24
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2w
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> somewhat 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>
Ap,A1 -- 0 to 16 in	clay loam	moderately slow	2.74 to 3.07 in	6.1 to 7.3
A2,AE,Bt -- 16 to 48 in	clay loam	moderately slow	4.15 to 5.10 in	6.1 to 7.3
Btg -- 48 to 67 in	clay loam	moderately slow	2.83 to 3.59 in	6.1 to 7.3
Cg -- 67 to 80 in	loam	moderate	1.95 to 2.47 in	7.4 to 8.4

#### Derrynane

<i>Extent:</i> 30 to 55 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> drainageways on moraines	<i>Wind erodibility group (WEG):</i> 4
<i>Slope gradient:</i> 1 to 3 percent	<i>Wind erodibility index (WEI):</i> 86
<i>Parent material:</i> alluvium and/or colluvium over till	<i>Kw factor (surface layer)</i> .20
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2w
<i>Flooding:</i> none	<i>Hydric soil:</i> yes
<i>Ponding:</i> none	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> 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>
Ap,A1 -- 0 to 19 in	clay loam	moderately slow	3.21 to 3.59 in	6.1 to 7.3
A2 -- 19 to 39 in	silty clay	moderately slow	2.61 to 3.21 in	6.1 to 7.3
Bg,2Bg -- 39 to 65 in	clay loam	moderately slow	3.90 to 4.94 in	6.1 to 7.3
2Cg -- 65 to 80 in	loam	moderate	2.24 to 2.84 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L49A--Klossner soils, depressional, 0 to 1 percent slopes

#### Klossner, surface drained

*Extent:* 50 to 100 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material over loamy glaciofluvial deposits

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 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>
Oa -- 0 to 26 in	muck	moderately rapid	9.09 to 12.47 in	
2A1 -- 26 to 33 in	silt loam	moderate	1.56 to 1.84 in	
2A2 -- 33 to 40 in	loam	moderate	1.28 to 1.56 in	
2Cg -- 40 to 80 in	loam	moderate	5.96 to 7.56 in	

#### Klossner, drained

*Extent:* 0 to 40 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material over loamy glaciofluvial deposits

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Op -- 0 to 10 in	muck	moderately rapid	3.44 to 4.72 in	
Oa -- 10 to 26 in	muck	moderately rapid	5.65 to 7.75 in	
2A1 -- 26 to 36 in	mucky silty clay loam	moderate	2.17 to 2.56 in	
2A2 -- 36 to 48 in	silty clay loam	moderate	2.20 to 2.69 in	
2Cg -- 48 to 80 in	loam	moderate	4.78 to 6.06 in	

## Map Unit Description (MN)

Waseca County, Minnesota

### L50A--Houghton and Muskego soils, depressional, 0 to 1 percent slopes

#### Houghton, surface drained

*Extent:* 20 to 60 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 6w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* high

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

#### Muskego, surface drained

*Extent:* 20 to 60 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material over coprogenic material

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 6w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa1 -- 0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa2 -- 9 to 36 in	muck	moderately rapid	9.37 to 12.05 in	
Lco -- 36 to 60 in	coprogenous earth	slow	4.32 to 5.76 in	

## Map Unit Description (MN)

Waseca County, Minnesota

### L51C2--Gladek silt loam, 6 to 12 percent slopes, eroded

#### Gladek, eroded

*Extent:* 70 to 90 percent of the unit

*Landform(s):* hills on lake plains

*Slope gradient:* 6 to 12 percent

*Parent material:* fine-silty lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .43

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* high

*Representative soil profile:*

		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap --	0 to 10 in	silt loam	moderate	2.17 to 2.36 in	6.1 to 7.3
Bt --	10 to 39 in	silt loam	moderate	5.24 to 5.83 in	6.1 to 7.3
C --	39 to 80 in	silt loam	moderate	6.96 to 9.01 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L56A--Muskego and Klossner soils, 0 to 1 percent slopes, frequently flooded

#### Klossner, frequently flooded

*Extent:* 30 to 100 percent of the unit

*Landform(s):* flood plains

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material over loamy glaciofluvial deposits

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

*Flooding:* frequent

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 6w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 26 in	muck	moderately rapid	9.09 to 12.47 in	
2A1 -- 26 to 33 in	silt loam	moderate	1.56 to 1.84 in	
2A2 -- 33 to 40 in	loam	moderate	1.28 to 1.56 in	
2Cg -- 40 to 80 in	loam	moderate	5.96 to 7.56 in	

#### Muskego, frequently flooded

*Extent:* 30 to 100 percent of the unit

*Landform(s):* flood plains

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material over coprogenic material

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

*Flooding:* frequent

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 6w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa1 -- 0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa2 -- 9 to 36 in	muck	moderately rapid	9.37 to 12.05 in	
Lco -- 36 to 60 in	coprogenous earth	slow	4.32 to 5.76 in	

## Map Unit Description (MN)

Waseca County, Minnesota

### L57A--Medo muck, depressional, 0 to 1 percent slopes

#### Medo, drained

*Extent:* 65 to 85 percent of the unit

*Landform(s):* depressions on outwash plains, stream terraces

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material over sandy outwash

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)*

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* high

#### *Representative soil profile:*

		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Op --	0 to 10 in	muck	moderately rapid	3.44 to 4.43 in	
Oa --	10 to 27 in	muck	moderately rapid	6.06 to 7.80 in	
2A --	27 to 35 in	mucky loam	moderately rapid	1.02 to 1.57 in	
2Bg --	35 to 39 in	sandy clay loam	moderately rapid	0.51 to 0.79 in	
2Cg --	39 to 80 in	gravelly loamy coarse sand	rapid	1.23 to 4.09 in	

## Map Unit Description (MN)

Waseca County, Minnesota

### L63A--Klossner muck, lake plain, depressional, 0 to 1 percent slopes

#### Klossner, lake plain

*Extent:* 75 to 95 percent of the unit

*Landform(s):* depressions on lake 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):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Op,Oa -- 0 to 25 in	muck	moderately rapid	8.68 to 11.91 in	
2A -- 25 to 40 in	silty clay loam	moderate	2.76 to 3.38 in	
2Cg -- 40 to 80 in	silty clay loam	moderate	7.16 to 8.75 in	

## Map Unit Description (MN)

Waseca County, Minnesota

### L64A--Tadkee-Tadkee, depressional, complex, 0 to 2 percent slopes

#### Tadkee

<i>Extent:</i> 20 to 70 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> beaches on moraines	<i>Wind erodibility group (WEG):</i> 2
<i>Slope gradient:</i> 0 to 2 percent	<i>Wind erodibility index (WEI):</i> 134
<i>Parent material:</i> beach sand over loamy till	<i>Kw factor (surface layer)</i> .10
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 3w
<i>Flooding:</i> none	<i>Hydric soil:</i> yes
<i>Ponding:</i> none	<i>Hydrologic group:</i> B/D
<i>Drainage class:</i> 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>
A -- 0 to 6 in	loamy fine sand	rapid	0.59 to 0.71 in	6.1 to 7.8
Bg -- 6 to 34 in	sand	rapid	1.40 to 3.35 in	6.1 to 7.8
2Cg -- 34 to 80 in	loam	moderate	6.91 to 8.75 in	7.4 to 8.4

#### Tadkee, depressional

<i>Extent:</i> 20 to 70 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> beaches on moraines	<i>Wind erodibility group (WEG):</i> 2
<i>Slope gradient:</i> 0 to 1 percent	<i>Wind erodibility index (WEI):</i> 134
<i>Parent material:</i> beach sand over loamy till	<i>Kw factor (surface layer)</i> .15
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 6w
<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>
A -- 0 to 6 in	mucky loamy fine sand	moderately rapid	2.07 to 2.66 in	6.1 to 7.8
Bg -- 6 to 27 in	sand	rapid	1.06 to 2.55 in	6.1 to 7.8
2Cg -- 27 to 80 in	loam	moderate	7.91 to 10.02 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca 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

## Map Unit Description (MN)

Waseca County, Minnesota

### L74A--Estherville sandy loam, terrace, 0 to 2 percent slopes

#### Estherville, terrace

*Extent:* 80 to 90 percent of the unit  
*Landform(s):* flats on stream terraces, rises on stream terraces  
*Slope gradient:* 0 to 2 percent  
*Parent material:* sandy outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat excessively drained

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

<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

### L75B--Barrington silt loam, 2 to 6 percent slopes

#### Barrington

*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:* moderately well drained

*Soil loss tolerance (T factor):* 5  
*Wind erodibility group (WEG):* 6  
*Wind erodibility index (WEI):* 48  
*Kw factor (surface layer)* .37  
*Land capability, nonirrigated* 2e  
*Hydric soil:* no  
*Hydrologic group:* 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,A -- 0 to 15 in	silt loam	moderate	3.29 to 3.89 in	5.6 to 7.3
Bt -- 15 to 33 in	silt loam	moderate	3.26 to 3.62 in	5.6 to 7.8
C -- 33 to 60 in	stratified loamy very fine sand to silt loam	moderate	1.87 to 2.94 in	6.1 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L76B--Dickinson fine sandy loam, 1 to 6 percent slopes

#### Dickinson

*Extent:* 70 to 90 percent of the unit

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

*Slope gradient:* 1 to 6 percent

*Parent material:* coarse-loamy 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:* moderate

<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	fine sandy loam	moderately rapid	1.70 to 2.13 in	5.6 to 7.3
Bw -- 14 to 39 in	fine sandy loam	moderately rapid	2.98 to 3.72 in	5.1 to 6.5
C -- 39 to 60 in	loamy fine sand	rapid	0.42 to 0.83 in	5.6 to 7.3

### L77A--Brownton silty clay loam, 0 to 2 percent slopes

#### Brownton

*Extent:* 65 to 90 percent of the unit

*Landform(s):* rims on depressions on lake plains

*Slope gradient:* 0 to 2 percent

*Parent material:* clayey lacustrine deposits over 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)* .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,AB -- 0 to 22 in	silty clay loam	slow	3.97 to 4.85 in	7.4 to 8.4
Bg -- 22 to 38 in	silty clay	slow	2.05 to 2.52 in	7.4 to 8.4
2Cg -- 38 to 60 in	loam	moderate	3.31 to 4.19 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### 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

### L79B--Clarion loam, 2 to 5 percent slopes

#### Clarion

*Extent:* 50 to 80 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)* .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 14 in	loam	moderate	2.83 to 3.12 in	5.6 to 7.3
Bw -- 14 to 33 in	loam	moderate	3.21 to 3.59 in	5.6 to 7.3
Bk -- 33 to 60 in	loam	moderate	4.02 to 5.09 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L80C2--Lester loam, 6 to 12 percent slopes, eroded

#### Lester, eroded

*Extent:* 65 to 90 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bt -- 7 to 38 in	clay loam	moderate	4.67 to 5.91 in	5.1 to 7.3
Bk -- 38 to 60 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L80D2--Lester loam, 12 to 18 percent slopes, eroded

#### Lester, eroded

*Extent:* 60 to 80 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 4e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bt -- 7 to 38 in	clay loam	moderate	4.67 to 5.91 in	5.1 to 7.3
Bk -- 38 to 60 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

### L81A--Cordova clay loam, 0 to 2 percent slopes

#### Cordova

*Extent:* 75 to 90 percent of the unit

*Landform(s):* swales on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<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	moderately slow	3.26 to 3.98 in	6.1 to 7.3
Btg -- 18 to 38 in	clay loam	moderately slow	3.01 to 3.81 in	5.1 to 6.5
Cg -- 38 to 80 in	loam	moderate	6.26 to 7.93 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L82A--Marna silty clay loam, 0 to 2 percent slopes

#### Marna

*Extent:* 70 to 90 percent of the unit

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

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<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	slow	3.61 to 4.42 in	6.1 to 7.3
Bg -- 20 to 32 in	clay	slow	1.54 to 1.89 in	6.1 to 7.3
2Bg -- 32 to 41 in	clay loam	moderately slow	1.36 to 1.72 in	6.6 to 7.4
2Bkg -- 41 to 60 in	loam	moderate	2.83 to 3.59 in	7.4 to 8.4

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

#### Webster

*Extent:* 50 to 85 percent of the unit

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

*Slope gradient:* 0 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<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

## Map Unit Description (MN)

Waseca County, Minnesota

### 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)

Waseca County, Minnesota

### L85A--Nicollet clay loam, 1 to 3 percent slopes

#### Nicollet

*Extent:* 70 to 95 percent of the unit

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

*Slope gradient:* 1 to 3 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 1

*Hydric soil:* no

*Hydrologic group:* B/D

*Potential for frost action:* high

<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	clay loam	moderate	2.88 to 3.72 in	5.6 to 7.3
Bw,Bg -- 17 to 33 in	clay loam	moderate	2.42 to 3.07 in	5.6 to 7.3
Bg -- 33 to 36 in	clay loam	moderate	0.41 to 0.52 in	7.4 to 8.4
Cg -- 36 to 60 in	loam	moderate	3.60 to 4.56 in	7.4 to 8.4

### L86A--Madelia silty clay loam, 0 to 2 percent slopes

#### Madelia

*Extent:* 80 to 95 percent of the unit

*Landform(s):* flats on lake plains

*Slope gradient:* 0 to 2 percent

*Parent material:* fine-silty lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A,AB -- 0 to 19 in	silty clay loam	moderate	3.40 to 4.54 in	6.1 to 7.3
Bg -- 19 to 37 in	silty clay loam	moderate	2.90 to 3.98 in	6.6 to 7.8
Cg -- 37 to 60 in	silt loam	moderate	3.65 to 5.02 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L87A--Kingston silty clay loam, 1 to 3 percent slopes

#### Kingston

*Extent:* 70 to 90 percent of the unit

*Landform(s):* rises on lake plains

*Slope gradient:* 1 to 3 percent

*Parent material:* fine-silty lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* 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* 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 -- 0 to 16 in	silty clay loam	moderate	2.91 to 3.87 in	5.6 to 7.3
Bg1,2 -- 16 to 25 in	silty clay loam	moderate	1.45 to 1.81 in	5.6 to 7.3
C -- 25 to 60 in	silt loam	moderate	5.54 to 6.93 in	7.4 to 8.4

### L88A--Lura silty clay, depressional, 0 to 1 percent slopes

#### Lura, depressional

*Extent:* 75 to 95 percent of the unit

*Landform(s):* depressions on lake 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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .15

*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	slow	1.38 to 1.67 in	6.1 to 7.8
A -- 10 to 58 in	clay	slow	6.72 to 8.17 in	6.1 to 7.3
Bg -- 58 to 72 in	silty clay	moderately slow	1.56 to 2.69 in	6.6 to 7.8

## Map Unit Description (MN)

Waseca County, Minnesota

### L89A--Guckeen silty clay loam, 0 to 3 percent slopes

#### Guckeen

*Extent:* 70 to 90 percent of the unit

*Landform(s):* rises on lake plains

*Slope gradient:* 0 to 3 percent

*Parent material:* clayey lacustrine deposits over fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*Hydric soil:* no

*Hydrologic group:* C/D

*Potential for frost action:* high

<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	silty clay loam	moderately slow	2.39 to 2.84 in	5.6 to 7.3
Bw -- 15 to 24 in	silty clay	moderately slow	1.18 to 1.45 in	5.6 to 7.3
2Bw -- 24 to 30 in	clay loam	moderately slow	0.89 to 1.00 in	6.1 to 7.3
2Cg -- 30 to 60 in	loam	moderate	4.49 to 5.69 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L90A--Le Sueur clay loam, 0 to 3 percent slopes

#### Le Sueur

*Extent:* 70 to 85 percent of the unit

*Landform(s):* rises on moraines

*Slope gradient:* 0 to 3 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* 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* 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,AB -- 0 to 17 in	clay loam	moderate	2.88 to 3.39 in	5.6 to 7.3
Bt -- 17 to 37 in	clay loam	moderate	3.01 to 3.81 in	5.1 to 7.3
Bk -- 37 to 46 in	loam	moderate	1.36 to 1.72 in	7.4 to 8.4
C -- 46 to 80 in	loam	moderate	5.08 to 6.43 in	7.4 to 8.4

### L91A--Mazaska silty clay loam, 0 to 2 percent slopes

#### Mazaska

*Extent:* 75 to 95 percent of the unit

*Landform(s):* flats on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* flow till over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .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 15 in	silty clay loam	moderately slow	2.54 to 3.29 in	6.1 to 7.3
Btg -- 15 to 42 in	clay	slow	2.72 to 4.35 in	4.5 to 6.5
Bkg -- 42 to 80 in	loam	moderate	5.67 to 7.18 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L92A--Darfur loam, 0 to 2 percent slopes

#### Darfur

*Extent:* 70 to 90 percent of the unit

*Landform(s):* flats on outwash plains

*Slope gradient:* 0 to 2 percent

*Parent material:* coarse-loamy outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*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 -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	6.1 to 7.3
A,AB -- 9 to 19 in	loam	moderate	1.97 to 2.17 in	6.1 to 7.3
Bg -- 19 to 31 in	fine sandy loam	moderately rapid	1.83 to 2.07 in	6.6 to 7.8
Cg -- 31 to 60 in	stratified fine sand to loamy fine sand to fine sandy loam	moderately rapid	2.30 to 2.87 in	6.6 to 7.8

## Map Unit Description (MN)

Waseca County, Minnesota

### L93A--Muskego muck, depressional, 0 to 1 percent slopes

#### Muskego, depressional

*Extent:* 70 to 90 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* herbaceous organic material over coprogenic material

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 1

*Wind erodibility group (WEG):* 2

*Wind erodibility index (WEI):* 134

*Kw factor (surface layer)* .02

*Land capability, nonirrigated* 4w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

#### *Representative soil profile:*

		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Op --	0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa --	9 to 16 in	muck	moderately rapid	2.48 to 3.19 in	
Lco --	16 to 76 in	coprogenous earth	slow	10.77 to 14.36 in	
Cg --	76 to 80 in	loam	moderate	0.59 to 0.75 in	

## Map Unit Description (MN)

Waseca County, Minnesota

### L94A--Lowlein fine sandy loam, terrace, 0 to 3 percent slopes

#### Lowlein, terrace

<i>Extent:</i> 60 to 85 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> flats on stream terraces, rises on stream terraces	<i>Wind erodibility group (WEG):</i> 3
<i>Slope gradient:</i> 0 to 3 percent	<i>Wind erodibility index (WEI):</i> 86
<i>Parent material:</i> coarse-loamy outwash over fine-loamy till	<i>Kw factor (surface layer)</i> .24
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 1
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> B
<i>Drainage class:</i> moderately well drained	<i>Potential for frost action:</i> moderate

<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	fine sandy loam	moderately rapid	2.35 to 2.72 in	6.1 to 7.3
Bw1 -- 18 to 27 in	fine sandy loam	moderately rapid	1.09 to 1.27 in	6.1 to 7.3
Bw2 -- 27 to 46 in	stratified loamy sand to fine sandy loam	moderately rapid	2.27 to 2.65 in	6.1 to 7.3
2Bw -- 46 to 72 in	silt loam	moderate	3.90 to 4.94 in	6.1 to 7.3
2C -- 72 to 80 in	silt loam	moderate	1.18 to 1.50 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L95E--Hawick gravelly coarse sandy loam, 12 to 25 percent slopes

#### Hawick

*Extent:* 70 to 90 percent of the unit

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

*Slope gradient:* 12 to 25 percent

*Parent material:* sandy and gravelly outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .10

*Land capability, nonirrigated* 7s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap --	0 to 7 in	gravelly coarse sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
AC --	7 to 10 in	gravelly loamy coarse sand	rapid	0.08 to 0.28 in	6.1 to 7.8
C --	10 to 60 in	gravelly coarse sand	very rapid	1.00 to 3.00 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

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

#### Estherville

*Extent:* 40 to 65 percent of the unit  
*Landform(s):* hills on outwash plains, hills on stream terraces  
*Slope gradient:* 2 to 6 percent  
*Parent material:* sandy outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat excessively drained

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

<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

*Extent:* 25 to 40 percent of the unit  
*Landform(s):* hills on outwash plains, hills on stream terraces  
*Slope gradient:* 2 to 6 percent  
*Parent material:* sandy outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5  
*Wind erodibility group (WEG):* 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 -- 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)

Waseca County, Minnesota

### L97C--Hawick-Estherville complex, 6 to 12 percent slopes

#### Hawick

*Extent:* 45 to 70 percent of the unit  
*Landform(s):* hills on outwash plains, hills on stream terraces  
*Slope gradient:* 6 to 12 percent  
*Parent material:* sandy outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5  
*Wind erodibility group (WEG):* 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 -- 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

#### Estherville

*Extent:* 25 to 40 percent of the unit  
*Landform(s):* hills on outwash plains, hills on stream terraces  
*Slope gradient:* 6 to 12 percent  
*Parent material:* sandy outwash  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2  
*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 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

## Map Unit Description (MN)

Waseca County, Minnesota

### L98A--Crippin-Nicollet complex, 1 to 3 percent slopes

#### Crippin

*Extent:* 40 to 60 percent of the unit  
*Landform(s):* flats on moraines, rises on moraines  
*Slope gradient:* 1 to 3 percent  
*Parent material:* till  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5  
*Wind erodibility group (WEG):* 4L  
*Wind erodibility index (WEI):* 86  
*Kw factor (surface layer)* .24  
*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,AB -- 0 to 15 in	loam	moderate	2.99 to 3.29 in	6.6 to 8.4
Bw -- 15 to 27 in	loam	moderate	2.07 to 2.32 in	7.4 to 8.4
C -- 27 to 60 in	loam	moderate	4.90 to 6.21 in	7.4 to 8.4

#### Nicollet

*Extent:* 30 to 45 percent of the unit  
*Landform(s):* flats on moraines, rises on moraines  
*Slope gradient:* 1 to 3 percent  
*Parent material:* till  
*Restrictive feature(s):* greater than 60 inches  
*Flooding:* none  
*Ponding:* none  
*Drainage class:* somewhat poorly drained

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

<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	clay loam	moderate	2.88 to 3.72 in	5.6 to 7.3
Bw,Bg1,2 -- 17 to 33 in	clay loam	moderate	2.42 to 3.07 in	5.6 to 7.3
Bg3 -- 33 to 36 in	clay loam	moderate	0.41 to 0.52 in	7.4 to 8.4
Bkg -- 36 to 60 in	loam	moderate	3.60 to 4.56 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L99B--Clarion-Swanlake complex, 2 to 6 percent slopes

#### Clarion

*Extent:* 50 to 70 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:* 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,A -- 0 to 14 in	loam	moderate	2.83 to 3.12 in	5.6 to 7.3
Bw -- 14 to 33 in	loam	moderate	3.21 to 3.59 in	5.6 to 7.3
Bk -- 33 to 60 in	loam	moderate	4.02 to 5.09 in	7.4 to 8.4

#### Swanlake

*Extent:* 15 to 30 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 3 to 6 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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)

Waseca County, Minnesota

### L100B--Clarion-Estherville complex, 2 to 6 percent slopes

#### Clarion

<i>Extent:</i> 40 to 50 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> hills on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 2 to 5 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> till	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2e
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> B
<i>Drainage class:</i> moderately well drained	<i>Potential for frost action:</i> moderate

<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	loam	moderate	2.83 to 3.12 in	5.6 to 7.3
Bw -- 14 to 33 in	loam	moderate	3.21 to 3.59 in	5.6 to 7.3
Bk -- 33 to 60 in	loam	moderate	4.02 to 5.09 in	7.4 to 8.4

#### Estherville

<i>Extent:</i> 30 to 50 percent of the unit	<i>Soil loss tolerance (T factor):</i> 2
<i>Landform(s):</i> hills on moraines	<i>Wind erodibility group (WEG):</i> 3
<i>Slope gradient:</i> 2 to 6 percent	<i>Wind erodibility index (WEI):</i> 86
<i>Parent material:</i> sandy outwash	<i>Kw factor (surface layer)</i> .20
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 3s
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> A
<i>Drainage class:</i> somewhat excessively 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	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

## Map Unit Description (MN)

Waseca County, Minnesota

### L101C2--Omsrud-Hawick-Storden complex, 6 to 12 percent slopes, eroded

#### Omsrud, eroded

*Extent:* 30 to 50 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bw -- 9 to 19 in	clay loam	moderate	1.67 to 1.87 in	5.6 to 7.3
Bk -- 19 to 36 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4
C -- 36 to 80 in	loam	moderate	6.61 to 8.38 in	7.4 to 8.4

#### Hawick

*Extent:* 25 to 35 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* sandy outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .17

*Land capability, nonirrigated* 4s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	gravelly sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw,C -- 7 to 80 in	gravelly coarse sand	very rapid	1.46 to 4.37 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L101C2--Omsrud-Hawick-Storden complex, 6 to 12 percent slopes, eroded

#### Storden, eroded

*Extent:* 15 to 25 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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)

Waseca County, Minnesota

### L101D2--Omsrud-Hawick-Storden complex, 12 to 18 percent slopes, eroded

#### Omsrud, eroded

*Extent:* 30 to 50 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 4e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bw -- 9 to 19 in	clay loam	moderate	1.67 to 1.87 in	5.6 to 7.3
Bk -- 19 to 36 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4
C -- 36 to 80 in	loam	moderate	6.61 to 8.38 in	7.4 to 8.4

#### Hawick

*Extent:* 25 to 35 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* sandy outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .15

*Land capability, nonirrigated* 6s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	gravelly coarse sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw,C -- 7 to 80 in	gravelly coarse sand	very rapid	1.46 to 4.37 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L101D2--Omsrud-Hawick-Storden complex, 12 to 18 percent slopes, eroded

#### Storden, eroded

*Extent:* 15 to 25 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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 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)

Waseca County, Minnesota

### L102C2--Omsrud-Storden complex, 6 to 12 percent slopes, eroded

#### Omsrud, eroded

*Extent:* 40 to 70 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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 9 in	loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bw -- 9 to 19 in	clay loam	moderate	1.67 to 1.87 in	5.6 to 7.3
Bk -- 19 to 36 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4
C -- 36 to 80 in	loam	moderate	6.61 to 8.38 in	7.4 to 8.4

#### Storden, eroded

*Extent:* 20 to 30 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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)

Waseca County, Minnesota

### L102D2--Omsrud-Storden complex, 12 to 18 percent slopes, eroded

#### Omsrud, eroded

*Extent:* 40 to 75 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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 -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bw -- 9 to 19 in	clay loam	moderate	1.67 to 1.87 in	5.6 to 7.3
Bk -- 19 to 36 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4
C -- 36 to 80 in	loam	moderate	6.61 to 8.38 in	7.4 to 8.4

#### Storden, eroded

*Extent:* 15 to 25 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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 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)

Waseca County, Minnesota

### L103A--Fieldon-Canisteo complex, 0 to 2 percent slopes

#### Fieldon

*Extent:* 45 to 55 percent of the unit

*Landform(s):* flats on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* coarse-loamy outwash over sandy outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* 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 19 in	loam	moderate	3.40 to 3.78 in	7.4 to 8.4
Bg,Bw -- 19 to 37 in	fine sandy loam	moderate	2.72 to 3.08 in	7.4 to 8.4
C,Cg -- 37 to 60 in	stratified fine sand to loamy fine sand	rapid	1.14 to 1.60 in	7.4 to 8.4

#### Canisteo

*Extent:* 30 to 40 percent of the unit

*Landform(s):* rims on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<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	3.13 to 3.96 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)

Waseca County, Minnesota

### L105C2--Lester-Hawick complex, 6 to 12 percent slopes, eroded

#### Lester, eroded

*Extent:* 30 to 55 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .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	5.6 to 7.3
Bt -- 7 to 38 in	clay loam	moderate	4.67 to 5.91 in	5.1 to 7.3
Bk -- 38 to 60 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

#### Hawick

*Extent:* 25 to 45 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* sandy and gravelly outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .17

*Land capability, nonirrigated* 4s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	gravelly sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw,C -- 7 to 80 in	gravelly coarse sand	very rapid	1.46 to 4.37 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L105D2--Lester-Hawick complex, 12 to 18 percent slopes, eroded

#### Lester, eroded

*Extent:* 30 to 55 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 4e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bt -- 7 to 38 in	clay loam	moderate	4.67 to 5.91 in	5.1 to 7.3
Bk -- 38 to 60 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

#### Hawick

*Extent:* 30 to 40 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* sandy outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* excessively drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 5

*Wind erodibility index (WEI):* 56

*Kw factor (surface layer)* .15

*Land capability, nonirrigated* 6s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	gravelly coarse sandy loam	rapid	0.21 to 0.92 in	6.1 to 7.8
Bw,C -- 7 to 80 in	gravelly coarse sand	very rapid	1.46 to 4.37 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L106C2--Lester-Storden complex, 6 to 12 percent slopes, eroded

#### Lester, eroded

*Extent:* 50 to 70 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .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	5.6 to 7.3
Bt -- 7 to 38 in	clay loam	moderate	4.67 to 5.91 in	5.1 to 7.3
Bk -- 38 to 60 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

#### Storden, eroded

*Extent:* 15 to 25 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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)

Waseca County, Minnesota

### L106D2--Lester-Storden complex, 12 to 18 percent slopes, eroded

#### Lester, eroded

*Extent:* 50 to 70 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .32

*Land capability, nonirrigated* 4e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bt -- 7 to 38 in	clay loam	moderate	4.67 to 5.91 in	5.1 to 7.3
Bk -- 38 to 60 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

#### Storden, eroded

*Extent:* 15 to 25 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 12 to 18 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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 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)

Waseca County, Minnesota

### L107A--Canisteo-Glencoe, depressional, complex, 0 to 2 percent slopes

#### Canisteo

*Extent:* 30 to 70 percent of the unit

*Landform(s):* rims on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 4L

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<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

#### Glencoe, depressional

*Extent:* 15 to 55 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* till

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* B/D

*Potential for frost action:* high

<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	moderate	1.77 to 2.17 in	6.1 to 7.8
A,ABg -- 10 to 35 in	clay loam	moderate	4.54 to 5.54 in	6.1 to 7.8
Bg -- 35 to 48 in	loam	moderate	1.95 to 2.47 in	6.6 to 7.8
Cg -- 48 to 60 in	loam	moderate	1.77 to 2.24 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L108A--Cordova-Rolfe, depressional, complex, 0 to 2 percent slopes

#### Cordova

*Extent:* 50 to 75 percent of the unit

*Landform(s):* flats on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .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>
Ap,A -- 0 to 18 in	clay loam	moderately slow	3.26 to 3.98 in	6.1 to 7.3
Btg -- 18 to 38 in	clay loam	moderately slow	3.01 to 3.81 in	5.1 to 6.5
Cg -- 38 to 80 in	loam	moderate	6.26 to 7.93 in	7.4 to 8.4

#### Rolfe, depressional

*Extent:* 15 to 35 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* glaciolacustrine deposits over till

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* 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 12 in	silt loam	moderate	2.60 to 2.83 in	5.1 to 7.3
E -- 12 to 20 in	silt loam	moderate	1.73 to 1.89 in	5.1 to 6.5
Btg -- 20 to 35 in	silty clay	slow	1.69 to 2.00 in	5.6 to 7.3
2Bt -- 35 to 51 in	clay loam	moderate	2.20 to 2.52 in	6.1 to 7.3
2Cg -- 51 to 60 in	loam	moderate	1.36 to 1.72 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L109A--Marna-Barbert, depressional, complex, 0 to 2 percent slopes

#### Marna

*Extent:* 55 to 75 percent of the unit

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

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<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	slow	3.61 to 4.42 in	6.1 to 7.3
Bg -- 20 to 32 in	clay	slow	1.54 to 1.89 in	6.1 to 7.3
2Bg -- 32 to 41 in	clay loam	moderately slow	1.36 to 1.72 in	6.6 to 7.4
2Bkg -- 41 to 60 in	loam	moderate	2.83 to 3.59 in	7.4 to 8.4

#### Barbert, depressional

*Extent:* 20 to 35 percent of the unit

*Landform(s):* depressions on lake plains

*Slope gradient:* 0 to 1 percent

*Parent material:* clayey lacustrine deposits

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 3

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .37

*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 7 in	silt loam	moderate	1.56 to 1.70 in	5.1 to 6.5
E -- 7 to 17 in	silt loam	moderate	2.17 to 2.36 in	5.1 to 6.5
Btg -- 17 to 43 in	clay	slow	2.60 to 3.64 in	5.1 to 7.3
C -- 43 to 60 in	silty clay loam	moderate	3.72 to 4.06 in	6.1 to 7.8

## Map Unit Description (MN)

Waseca County, Minnesota

### L110E--Lester-Ridgeton complex, 18 to 25 percent slopes

#### Lester

<i>Extent:</i> 45 to 65 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> escarpments on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 18 to 25 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> fine-loamy till	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 6e
<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> moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	loam	moderate	1.02 to 1.13 in	5.6 to 7.3
BE,Bt -- 5 to 34 in	clay loam	moderate	4.31 to 5.46 in	5.1 to 7.3
Bk -- 34 to 60 in	loam	moderate	3.90 to 4.94 in	7.4 to 8.4
C -- 60 to 80 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4

#### Ridgeton

<i>Extent:</i> 20 to 40 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> escarpments on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 12 to 25 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> fine-loamy colluvium	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 4e
<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> moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1,A2,A3 -- 0 to 32 in	loam	moderate	6.38 to 7.02 in	6.1 to 7.3
Bw -- 32 to 40 in	loam	moderate	1.32 to 1.49 in	6.1 to 7.3
C1,C2 -- 40 to 80 in	loam	moderate	5.96 to 7.56 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L110F--Lester-Ridgeton complex, 25 to 45 percent slopes

#### Lester

<i>Extent:</i> 45 to 65 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> escarpments on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 25 to 45 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> fine-loamy till	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 7e
<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> moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 6 in	loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 6 to 25 in	clay loam	moderate	2.83 to 3.59 in	5.1 to 7.3
C -- 25 to 60 in	loam	moderate	5.26 to 6.66 in	7.4 to 8.4

#### Ridgeton

<i>Extent:</i> 20 to 40 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> escarpments on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 18 to 25 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> fine-loamy colluvium	<i>Kw factor (surface layer)</i> .28
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 6e
<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> moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1,A2,A3 -- 0 to 32 in	loam	moderate	6.38 to 7.02 in	6.1 to 7.3
Bw -- 32 to 40 in	loam	moderate	1.32 to 1.49 in	6.1 to 7.3
C1,C2 -- 40 to 80 in	loam	moderate	5.96 to 7.56 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L111A--Nicollet silty clay loam, 1 to 3 percent slopes

#### Nicollet

*Extent:* 70 to 90 percent of the unit

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

*Slope gradient:* 1 to 3 percent

*Parent material:* lacustrine sediments 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)* .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 -- 0 to 10 in	silty clay loam	moderate	1.67 to 2.17 in	5.6 to 7.3
Bw -- 10 to 31 in	clay loam	moderate	3.13 to 3.96 in	5.6 to 7.8
Bk -- 31 to 42 in	loam	moderate	1.65 to 2.09 in	7.4 to 8.4
C -- 42 to 80 in	loam	moderate	5.73 to 7.26 in	7.4 to 8.4

### L112A--Webster silty clay loam, 0 to 2 percent slopes

#### Webster

*Extent:* 75 to 90 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)* .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 24 in	silty clay loam	moderate	4.56 to 5.04 in	6.6 to 7.3
Bg -- 24 to 45 in	clay loam	moderate	3.40 to 3.83 in	6.6 to 7.8
Cg -- 45 to 80 in	loam	moderate	5.20 to 6.58 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L113B--Reedslake loam, 2 to 5 percent slopes

#### Reedslake

*Extent:* 65 to 80 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 5 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	loam	moderate	2.36 to 2.60 in	5.6 to 7.3
Bt -- 12 to 26 in	clay loam	moderate	2.13 to 2.69 in	5.6 to 7.3
Bk -- 26 to 48 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 48 to 80 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L114A--Hanlon fine sandy loam, 0 to 3 percent slopes, rarely flooded

#### Hanlon, rarely flooded

*Extent:* 70 to 95 percent of the unit

*Landform(s):* flood plains

*Slope gradient:* 0 to 3 percent

*Parent material:* coarse-loamy alluvium

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

*Flooding:* rare

*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)* .24

*Land capability, nonirrigated* 2s

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A --	0 to 24 in	fine sandy loam	moderately rapid	3.84 to 4.32 in	6.1 to 7.3
AB --	24 to 52 in	fine sandy loam	moderately rapid	4.47 to 5.03 in	6.1 to 7.3
Bw1 --	52 to 57 in	fine sandy loam	moderately rapid	0.56 to 0.67 in	5.6 to 7.3
Bw2,C --	57 to 80 in	stratified fine sand to loamy fine sand to fine sandy loam	moderately rapid	2.74 to 4.34 in	5.6 to 7.8

## Map Unit Description (MN)

Waseca County, Minnesota

### L115A--Brownton-Lura, depressional, complex, 0 to 2 percent slopes

#### Brownton

*Extent:* 50 to 60 percent of the unit

*Landform(s):* rims on lake plains

*Slope gradient:* 0 to 2 percent

*Parent material:* clayey lacustrine deposits over 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)* .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,AB -- 0 to 22 in	silty clay loam	slow	3.97 to 4.85 in	7.4 to 8.4
Bg -- 22 to 38 in	silty clay	slow	2.05 to 2.52 in	7.4 to 8.4
2Cg -- 38 to 60 in	loam	moderate	3.31 to 4.19 in	7.4 to 8.4

#### Lura, depressional

*Extent:* 30 to 40 percent of the unit

*Landform(s):* depressions on lake 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):* 4

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* C/D

*Potential for frost action:* high

<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	slow	1.38 to 1.67 in	6.1 to 7.8
A -- 10 to 58 in	clay	slow	6.72 to 8.17 in	6.1 to 7.3
Bg -- 58 to 72 in	silty clay	moderately slow	1.56 to 2.69 in	6.6 to 7.8

## Map Unit Description (MN)

Waseca County, Minnesota

### L116A--Le Sueur-Lerdal complex, 1 to 3 percent slopes

#### Le Sueur

*Extent:* 35 to 55 percent of the unit

*Landform(s):* rises on moraines

*Slope gradient:* 1 to 3 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .20

*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,AB -- 0 to 17 in	clay loam	moderate	2.88 to 3.39 in	5.6 to 7.3
Bt -- 17 to 37 in	clay loam	moderate	3.01 to 3.81 in	5.1 to 7.3
Bk -- 37 to 46 in	loam	moderate	1.36 to 1.72 in	7.4 to 8.4
C -- 46 to 80 in	loam	moderate	5.08 to 6.43 in	7.4 to 8.4

#### Lerdal

*Extent:* 30 to 50 percent of the unit

*Landform(s):* rises on moraines

*Slope gradient:* 1 to 3 percent

*Parent material:* clayey flow till 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* 2e

*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 8 in	clay loam	moderate	1.42 to 1.73 in	5.6 to 6.5
E -- 8 to 12 in	clay loam	moderate	0.71 to 0.87 in	5.6 to 6.5
Bt,Btg -- 12 to 41 in	silty clay loam	slow	3.79 to 5.54 in	4.5 to 6.0
Bk -- 41 to 80 in	loam	moderate	5.85 to 7.41 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L117C2--Omsrud loam, 6 to 12 percent slopes, eroded

#### Omsrud, eroded

*Extent:* 55 to 75 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 6 to 12 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 3e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bw -- 9 to 19 in	clay loam	moderate	1.67 to 1.87 in	5.6 to 7.3
Bk -- 19 to 36 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4
C -- 36 to 80 in	loam	moderate	6.61 to 8.38 in	7.4 to 8.4

### L118A--Rushriver fine sandy loam, 0 to 1 percent slopes, frequently flooded

#### Rushriver, frequently flooded

*Extent:* 70 to 90 percent of the unit

*Landform(s):* flood plains

*Slope gradient:* 0 to 1 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):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 5w

*Hydric soil:* yes

*Hydrologic group:* A/D

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 41 in	fine sandy loam	moderately rapid	4.50 to 6.96 in	7.4 to 8.4
C -- 41 to 80 in	stratified fine sand to loamy very fine sand to silt loam	rapid	2.34 to 5.85 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L119B--Angus loam, 2 to 5 percent slopes

#### Angus

*Extent:* 50 to 90 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 5 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<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	5.6 to 7.3
Bt -- 8 to 35 in	clay loam	moderate	4.07 to 5.16 in	5.1 to 7.3
BC -- 35 to 40 in	clay loam	moderate	0.72 to 0.97 in	6.1 to 7.8
C -- 40 to 80 in	loam	moderate	5.96 to 7.56 in	7.4 to 8.4

### L120A--Good Thunder silty clay loam, 0 to 3 percent slopes

#### Good Thunder

*Extent:* 70 to 90 percent of the unit

*Landform(s):* rises on lake plains

*Slope gradient:* 0 to 3 percent

*Parent material:* clayey lacustrine deposits

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

*Flooding:* none

*Ponding:* none

*Drainage class:* 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* 2w

*Hydric soil:* no

*Hydrologic group:* C

*Potential for frost action:* high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 15 in	silty clay loam	moderately slow	2.69 to 3.29 in	5.6 to 7.3
Bt -- 15 to 32 in	silty clay	moderately slow	2.20 to 2.71 in	5.1 to 7.3
C -- 32 to 80 in	silt loam	moderate	7.69 to 9.61 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L121B--Clarion clay loam, 2 to 5 percent slopes

#### Clarion

*Extent:* 70 to 90 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 5 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* 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:* B

*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 13 in	clay loam	moderate	2.60 to 2.86 in	5.6 to 7.3
Bw --	13 to 37 in	clay loam	moderate	4.08 to 4.56 in	5.6 to 7.3
C --	37 to 80 in	loam	moderate	6.44 to 8.15 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L122B--Reedslake-Estherville complex, 2 to 6 percent slopes

#### Reedslake

*Extent:* 45 to 65 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 5 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* well drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .28

*Land capability, nonirrigated* 2e

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	loam	moderate	2.36 to 2.60 in	5.6 to 7.3
Bt -- 12 to 26 in	clay loam	moderate	2.13 to 2.69 in	5.6 to 7.3
Bk -- 26 to 48 in	loam	moderate	3.25 to 4.11 in	7.4 to 8.4
C -- 48 to 80 in	loam	moderate	4.84 to 6.13 in	7.4 to 8.4

#### Estherville

*Extent:* 15 to 40 percent of the unit

*Landform(s):* hills on moraines

*Slope gradient:* 2 to 6 percent

*Parent material:* sandy outwash

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

*Flooding:* none

*Ponding:* none

*Drainage class:* somewhat excessively drained

*Soil loss tolerance (T factor):* 2

*Wind erodibility group (WEG):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .20

*Land capability, nonirrigated* 3s

*Hydric soil:* no

*Hydrologic group:* A

*Potential for frost action:* low

<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

## Map Unit Description (MN)

Waseca County, Minnesota

### L123A--Belleville sandy loam, 0 to 2 percent slopes

#### Belleville

*Extent:* 80 to 95 percent of the unit

*Landform(s):* beaches on moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* glaciolacustrine 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):* 3

*Wind erodibility index (WEI):* 86

*Kw factor (surface layer)* .17

*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 11 in	sandy loam	moderately rapid	1.43 to 1.98 in	6.1 to 7.3
Bg -- 11 to 27 in	loamy sand	rapid	0.63 to 1.89 in	6.1 to 7.3
2Bg -- 27 to 48 in	loam	moderately slow	2.55 to 4.25 in	6.1 to 7.3
2Cg -- 48 to 80 in	loam	moderate	4.78 to 6.06 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L124A--Glencoe mucky clay loam, depressional, 0 to 1 percent slopes

#### Glencoe, mucky clay loam, depressional

*Extent:* 80 to 90 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* fine-loamy till

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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	mucky clay loam	moderate	2.17 to 2.46 in	6.1 to 7.8
A -- 10 to 29 in	clay loam	moderate	3.47 to 4.24 in	6.1 to 7.8
Bg -- 29 to 42 in	loam	moderate	1.95 to 2.47 in	6.6 to 7.8
Cg -- 42 to 60 in	loam	moderate	2.66 to 3.37 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca County, Minnesota

### L125A--Hanlon, rarely flooded-Coland, occasionally flooded, complex, 0 to 3 percent slopes

#### Hanlon, rarely flooded

*Extent:* 35 to 65 percent of the unit

*Landform(s):* flood plains

*Slope gradient:* 0 to 3 percent

*Parent material:* coarse-loamy alluvium

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

*Flooding:* rare

*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)* .24

*Land capability, nonirrigated* 2s

*Hydric soil:* no

*Hydrologic group:* B

*Potential for frost action:* moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 24 in	fine sandy loam	moderately rapid	3.84 to 4.32 in	6.1 to 7.3
AB -- 24 to 52 in	fine sandy loam	moderately rapid	4.47 to 5.03 in	6.1 to 7.3
Bw1 -- 52 to 57 in	fine sandy loam	moderately rapid	0.56 to 0.67 in	5.6 to 7.3
Bw2,C -- 57 to 80 in	stratified fine sand to loamy fine sand to fine sandy loam	moderately rapid	2.74 to 4.34 in	5.6 to 7.8

#### Coland, occasionally flooded

*Extent:* 25 to 40 percent of the unit

*Landform(s):* flood plains

*Slope gradient:* 0 to 2 percent

*Parent material:* fine-loamy alluvium

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

*Flooding:* occasional

*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)* .20

*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 25 in	silty clay loam	moderate	5.04 to 5.54 in	6.1 to 7.3
AC,Cg1 -- 25 to 54 in	loam	moderate	5.75 to 6.32 in	6.1 to 7.3
Cg2 -- 54 to 60 in	sandy loam	moderately rapid	0.77 to 1.00 in	6.1 to 7.8

## Map Unit Description (MN)

Waseca County, Minnesota

### L126A--Coland silty clay loam, 0 to 2 percent slopes, occasionally flooded

#### Coland, occasionally flooded

*Extent:* 65 to 90 percent of the unit

*Landform(s):* flats on flood plains

*Slope gradient:* 0 to 2 percent

*Parent material:* fine-loamy alluvium

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

*Flooding:* occasional

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 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,A -- 0 to 25 in	silty clay loam	moderate	5.04 to 5.54 in	6.1 to 7.3
AC,Cg1 -- 25 to 54 in	loam	moderate	5.75 to 6.32 in	6.1 to 7.3
Cg2 -- 54 to 60 in	sandy loam	moderately rapid	0.77 to 1.00 in	6.1 to 7.8

### L127A--Coland silty clay loam, channeled, 0 to 2 percent slopes, frequently flooded

#### Coland, frequently flooded

*Extent:* 65 to 90 percent of the unit

*Landform(s):* flats on flood plains

*Slope gradient:* 0 to 2 percent

*Parent material:* fine-loamy alluvium

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

*Flooding:* frequent

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*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 -- 0 to 12 in	silty clay loam	moderate	2.36 to 2.60 in	6.1 to 7.3
A2 -- 12 to 30 in	loam	moderate	3.62 to 3.98 in	6.1 to 7.3
A3 -- 30 to 55 in	stratified fine sandy loam to loam	moderate	5.04 to 5.54 in	6.1 to 7.3
AB,Bg -- 55 to 80 in	fine sandy loam	moderately rapid	3.22 to 4.22 in	6.1 to 7.8

## Map Unit Description (MN)

Waseca County, Minnesota

### L128A--Mazaska-Rolfe, depressional, complex, 0 to 2 percent slopes

#### Mazaska

*Extent:* 50 to 70 percent of the unit

*Landform(s):* flats, moraines

*Slope gradient:* 0 to 2 percent

*Parent material:* flow till over till

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

*Flooding:* none

*Ponding:* none

*Drainage class:* poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .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 15 in	silty clay loam	moderately slow	2.54 to 3.29 in	6.1 to 7.3
Btg -- 15 to 42 in	clay	slow	2.72 to 4.35 in	4.5 to 6.5
Bkg -- 42 to 80 in	loam	moderate	5.67 to 7.18 in	7.4 to 8.4

#### Rolfe, depressional

*Extent:* 20 to 35 percent of the unit

*Landform(s):* depressions on moraines

*Slope gradient:* 0 to 1 percent

*Parent material:* glaciolacustrine deposits over till

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

*Flooding:* none

*Ponding:* frequent

*Drainage class:* very poorly drained

*Soil loss tolerance (T factor):* 5

*Wind erodibility group (WEG):* 6

*Wind erodibility index (WEI):* 48

*Kw factor (surface layer)* .24

*Land capability, nonirrigated* 3w

*Hydric soil:* yes

*Hydrologic group:* 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 12 in	silt loam	moderate	2.60 to 2.83 in	5.1 to 7.3
E -- 12 to 20 in	silt loam	moderate	1.73 to 1.89 in	5.1 to 6.5
Btg -- 20 to 35 in	silty clay	slow	1.69 to 2.00 in	5.6 to 7.3
2Bt -- 35 to 51 in	clay loam	moderate	2.20 to 2.52 in	6.1 to 7.3
2Cg -- 51 to 60 in	loam	moderate	1.36 to 1.72 in	7.4 to 8.4

## Map Unit Description (MN)

Waseca 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:* fine-loamy colluvium

*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)

Waseca County, Minnesota

### L130A--Okoboji mucky silty clay loam, depressional, 0 to 1 percent slopes

#### Okoboji, depressional

*Extent:* 60 to 85 percent of the unit

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

*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:* 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	mucky silty clay loam	moderate	2.86 to 3.25 in	6.1 to 7.8
A -- 13 to 35 in	silty clay loam	moderately slow	3.97 to 4.41 in	6.6 to 7.8
Bg -- 35 to 60 in	silty clay loam	moderately slow	4.46 to 4.96 in	6.6 to 8.4

### 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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## Map Unit Description (MN)

Waseca County, Minnesota

### U3B--Udorthents, loamy (cut and fill land), 0 to 6 percent slopes

#### Udorthents, cut and fill land

*Extent:* 100 percent of the unit

*Landform(s):* moraines

*Slope gradient:* 0 to 6 percent

*Parent material:* variable soil material

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

*Flooding:* none

*Ponding:* none

*Drainage class:*

*Soil loss tolerance (T factor):*

*Wind erodibility group (WEG):*

*Wind erodibility index (WEI):*

*Kw factor (surface layer)*

*Land capability, nonirrigated*

*Hydric soil:*

*Hydrologic group:*

*Potential for frost action:*

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