

Map Unit Description (MN)

Crow Wing 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]

1007--Udorthents, shallow (sanitary landfill)

Udorthents, shallow (sanitary landfill)

Extent: 100 percent of the unit

Landform(s): sanitary landfills on moraines

Slope gradient:

Parent material: variable soil material

Restrictive feature(s): greater than 60 inches

Flooding:

Ponding:

Drainage class: well drained

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil: no

Hydrologic group:

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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D49D--Graycalm loamy sand, 12 to 25 percent slopes

Graycalm

Extent: 70 to 90 percent of the unit

Landform(s): lake plains

Slope gradient: 12 to 25 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 6e

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	loamy sand	rapid	0.51 to 0.61 in	4.5 to 6.0
Bw1 -- 5 to 13 in	loamy fine sand	rapid	0.79 to 1.10 in	5.1 to 6.1
Bw2 -- 13 to 44 in	sand	rapid	1.57 to 2.20 in	5.6 to 6.4
E and Bt -- 44 to 80 in	sand	rapid	1.77 to 2.48 in	5.8 to 6.7

Map Unit Description (MN)

Crow Wing County, Minnesota

D53B--Lougee-Barber-Guida complex, 0 to 6 percent slopes

Lougee

<i>Extent:</i> 25 to 55 percent of the unit	<i>Soil loss tolerance (T factor):</i> 1
<i>Landform(s):</i> depressions on lake plains	<i>Wind erodibility group (WEG):</i> 8
<i>Slope gradient:</i> 0 to 1 percent	<i>Wind erodibility index (WEI):</i> 0
<i>Parent material:</i> herbaceous organic material over glaciolacustrine deposits	<i>Kw factor (surface layer)</i> .02
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated:</i> 7w
<i>Flooding:</i> none	<i>Hydric soil:</i> yes
<i>Ponding:</i> none	<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>
Oi -- 0 to 3 in	peat	very rapid	1.73 to 2.05 in	
Oe -- 3 to 12 in	mucky peat	rapid	3.90 to 4.76 in	
Oa -- 12 to 28 in	muck	moderately rapid	5.51 to 7.09 in	
2A -- 28 to 31 in	mucky loamy fine sand	rapid	0.39 to 0.47 in	5.6 to 7.0
2Cg1 -- 31 to 43 in	fine sand	rapid	0.83 to 1.06 in	5.6 to 7.0
2Cg2 -- 43 to 55 in	fine sand	rapid	0.83 to 1.06 in	5.6 to 7.0
2Cg3 -- 55 to 80 in	fine sand	rapid	1.74 to 2.23 in	5.6 to 7.0

Barber

<i>Extent:</i> 25 to 45 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> lake plains	<i>Wind erodibility group (WEG):</i> 2
<i>Slope gradient:</i> 0 to 4 percent	<i>Wind erodibility index (WEI):</i> 134
<i>Parent material:</i> glaciolacustrine deposits	<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/D
<i>Drainage class:</i> somewhat poorly 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>
A -- 0 to 3 in	loamy fine sand	rapid	0.35 to 0.47 in	4.5 to 5.1
Bw1 -- 3 to 18 in	loamy fine sand	rapid	1.05 to 2.09 in	4.5 to 5.5
Bw2 -- 18 to 30 in	fine sand	rapid	0.59 to 0.94 in	5.1 to 6.5
Cg -- 30 to 80 in	fine sand	rapid	3.00 to 5.50 in	5.1 to 6.5

Map Unit Description (MN)

Crow Wing County, Minnesota

D53B--Lougee-Barber-Guida complex, 0 to 6 percent slopes

Guida

Extent: 15 to 30 percent of the unit

Landform(s): lake plains

Slope gradient: 2 to 6 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

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>
A -- 0 to 6 in	loamy fine sand	rapid	0.69 to 0.94 in	4.5 to 5.1
Bw1 -- 6 to 15 in	loamy fine sand	rapid	0.58 to 1.16 in	4.5 to 5.5
Bw2 -- 15 to 30 in	fine sand	rapid	0.75 to 1.20 in	5.1 to 6.5
Bw3 -- 30 to 41 in	fine sand	rapid	0.57 to 0.91 in	5.1 to 6.5
E and Bt -- 41 to 57 in	fine sand	rapid	0.94 to 2.20 in	5.1 to 6.5
C -- 57 to 80 in	fine sand	rapid	1.39 to 2.56 in	5.1 to 6.5

Map Unit Description (MN)

Crow Wing County, Minnesota

D62A--Zimmerman loamy fine sand, 0 to 2 percent slopes

Zimmerman

Extent: 85 to 95 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 2 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .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>
A -- 0 to 4 in	loamy fine sand	rapid	0.43 to 0.59 in	4.5 to 5.1
Bw1 -- 4 to 10 in	loamy fine sand	rapid	0.41 to 0.83 in	4.5 to 5.5
Bw2 -- 10 to 19 in	fine sand	rapid	0.45 to 0.72 in	5.1 to 6.5
E and Bt1 -- 19 to 23 in	fine sand	rapid	0.24 to 0.55 in	5.1 to 6.5
E and Bt2 -- 23 to 80 in	fine sand	rapid	3.43 to 6.28 in	5.1 to 6.5

Map Unit Description (MN)

Crow Wing County, Minnesota

D62B--Zimmerman loamy fine sand, 1 to 6 percent slopes

Zimmerman

Extent: 100 to 100 percent of the unit

Landform(s): lake plains

Slope gradient: 1 to 6 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .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>
A -- 0 to 4 in	loamy fine sand	rapid	0.43 to 0.59 in	4.5 to 5.1
Bw1 -- 4 to 10 in	loamy fine sand	rapid	0.41 to 0.83 in	4.5 to 5.5
Bw2 -- 10 to 19 in	fine sand	rapid	0.45 to 0.72 in	5.1 to 6.5
E and Bt1 -- 19 to 23 in	fine sand	rapid	0.24 to 0.55 in	5.1 to 6.5
E and Bt2 -- 23 to 80 in	fine sand	rapid	3.43 to 6.28 in	5.1 to 6.5

Map Unit Description (MN)

Crow Wing County, Minnesota

D62C--Zimmerman loamy fine sand, 6 to 15 percent slopes

Zimmerman

Extent: 80 to 95 percent of the unit

Landform(s): lake plains

Slope gradient: 6 to 15 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .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>
A -- 0 to 4 in	loamy fine sand	rapid	0.43 to 0.59 in	4.5 to 5.1
Bw1 -- 4 to 10 in	loamy fine sand	rapid	0.41 to 0.83 in	4.5 to 5.5
Bw2 -- 10 to 19 in	fine sand	rapid	0.45 to 0.72 in	5.1 to 6.5
E and Bt1 -- 19 to 23 in	fine sand	rapid	0.24 to 0.55 in	5.1 to 6.5
E and Bt2 -- 23 to 80 in	fine sand	rapid	3.43 to 6.28 in	5.1 to 6.5

Map Unit Description (MN)

Crow Wing County, Minnesota

D63A--Zimmerman loamy fine sand, 0 to 3 percent slopes, pitted

Zimmerman, pitted

Extent: 75 to 90 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 3 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .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>
A -- 0 to 4 in	loamy fine sand	rapid	0.43 to 0.59 in	4.5 to 5.1
Bw1 -- 4 to 10 in	loamy fine sand	rapid	0.41 to 0.83 in	4.5 to 5.5
Bw2 -- 10 to 19 in	fine sand	rapid	0.45 to 0.72 in	5.1 to 6.5
E and Bt1 -- 19 to 23 in	fine sand	rapid	0.24 to 0.55 in	5.1 to 6.5
E and Bt2 -- 23 to 80 in	fine sand	rapid	3.43 to 6.28 in	5.1 to 6.5

Map Unit Description (MN)

Crow Wing County, Minnesota

D65A--Lougee peat, zimmerman catena, 0 to 1 percent slopes

Lougee

Extent: 90 to 98 percent of the unit

Landform(s): closed depressions on lake plains

Slope gradient: 0 to 1 percent

Parent material: herbaceous organic material over glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 7w

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>
Oi --	0 to 3 in	peat	very rapid	1.73 to 2.05 in	
Oe --	3 to 12 in	mucky peat	rapid	3.90 to 4.76 in	
Oa --	12 to 28 in	muck	moderately rapid	5.51 to 7.09 in	
2A --	28 to 31 in	mucky loamy fine sand	rapid	0.39 to 0.47 in	5.6 to 7.0
2Cg1 --	31 to 43 in	fine sand	rapid	0.83 to 1.06 in	5.6 to 7.0
2Cg2 --	43 to 55 in	fine sand	rapid	0.83 to 1.06 in	5.6 to 7.0
2Cg3 --	55 to 80 in	fine sand	rapid	1.74 to 2.23 in	5.6 to 7.0

Map Unit Description (MN)

Crow Wing County, Minnesota

D66A--Uskabwanka-Rifle-Barber complex, 0 to 3 percent slopes

Uskabwanka

Extent: 20 to 50 percent of the unit

Landform(s): closed depressions on lake plains

Slope gradient: 0 to 1 percent

Parent material: herbaceous organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 10 in	peat	very rapid	5.41 to 6.40 in	
Oe1 -- 10 to 40 in	mucky peat	rapid	13.64 to 16.67 in	
2Oe2 -- 40 to 70 in	water	impermeable		
Oe3 -- 70 to 80 in	mucky peat	rapid	4.43 to 5.41 in	

Rifle, ponded

Extent: 15 to 45 percent of the unit

Landform(s): closed depressions on lake plains

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): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 12 in	peat	very rapid	6.50 to 7.68 in	
Oe -- 12 to 43 in	mucky peat	rapid	14.17 to 17.32 in	
Oa1 -- 43 to 59 in	muck	moderately rapid	5.51 to 7.09 in	
Oa2 -- 59 to 80 in	muck	moderately rapid	7.30 to 9.39 in	

Map Unit Description (MN)

Crow Wing County, Minnesota

D66A--Uskabwanka-Rifle-Barber complex, 0 to 3 percent slopes

Barber

Extent: 10 to 20 percent of the unit

Landform(s): lake plains

Slope gradient: 0 to 3 percent

Parent material: glaciolacustrine 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): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .20

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: A/D

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	loamy fine sand	rapid	0.35 to 0.47 in	4.5 to 5.1
Bw1 -- 3 to 18 in	loamy fine sand	rapid	1.05 to 2.09 in	4.5 to 5.5
Bw2 -- 18 to 30 in	fine sand	rapid	0.59 to 0.94 in	5.1 to 6.5
Cg -- 30 to 80 in	fine sand	rapid	3.00 to 5.50 in	5.1 to 6.5

Map Unit Description (MN)

Crow Wing County, Minnesota

D67A--Rifle soils, zimmerman catena, 0 to 1 percent slopes

Rifle, ponded

Extent: 0 to 95 percent of the unit

Landform(s): closed depressions on lake plains

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): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 12 in	peat	very rapid	6.50 to 7.68 in	
Oe -- 12 to 43 in	mucky peat	rapid	14.17 to 17.32 in	
Oa1 -- 43 to 59 in	muck	moderately rapid	5.51 to 7.09 in	
Oa2 -- 59 to 80 in	muck	moderately rapid	7.30 to 9.39 in	

Rifle

Extent: 0 to 95 percent of the unit

Landform(s): closed depressions on lake plains

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): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 7w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 12 in	peat	very rapid	6.50 to 7.68 in	
Oe -- 12 to 43 in	mucky peat	rapid	14.17 to 17.32 in	
Oa1 -- 43 to 59 in	muck	moderately rapid	5.51 to 7.09 in	
Oa2 -- 59 to 80 in	muck	moderately rapid	7.30 to 9.39 in	

Map Unit Description (MN)

Crow Wing County, Minnesota

D68A--Uskabwanka-Rifle-Lougee complex, 0 to 1 percent slopes

Uskabwanka

Extent: 25 to 75 percent of the unit

Landform(s): closed depressions on lake plains

Slope gradient: 0 to 1 percent

Parent material: herbaceous organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 10 in	peat	very rapid	5.41 to 6.40 in	
Oe1 -- 10 to 40 in	mucky peat	rapid	13.64 to 16.67 in	
2Oe2 -- 40 to 70 in	water	impermeable		
Oe3 -- 70 to 80 in	mucky peat	rapid	4.43 to 5.41 in	

Rifle, ponded

Extent: 15 to 55 percent of the unit

Landform(s): closed depressions on lake plains

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): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 12 in	peat	very rapid	6.50 to 7.68 in	
Oe -- 12 to 43 in	mucky peat	rapid	14.17 to 17.32 in	
Oa1 -- 43 to 59 in	muck	moderately rapid	5.51 to 7.09 in	
Oa2 -- 59 to 80 in	muck	moderately rapid	7.30 to 9.39 in	

Map Unit Description (MN)

Crow Wing County, Minnesota

D68A--Uskabwanka-Rifle-Lougee complex, 0 to 1 percent slopes

Lougee, ponded

Extent: 10 to 20 percent of the unit

Landform(s): closed depressions on lake plains

Slope gradient: 0 to 1 percent

Parent material: herbaceous organic material over
glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

Representative soil profile:

	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 3 in	peat	very rapid	1.73 to 2.05 in	
Oe -- 3 to 12 in	mucky peat	rapid	3.90 to 4.76 in	
Oa -- 12 to 28 in	muck	moderately rapid	5.51 to 7.09 in	
2A -- 28 to 31 in	mucky loamy fine sand	rapid	0.39 to 0.47 in	5.6 to 7.0
2Cg1 -- 31 to 43 in	fine sand	rapid	0.83 to 1.06 in	5.6 to 7.0
2Cg2 -- 43 to 55 in	fine sand	rapid	0.83 to 1.06 in	5.6 to 7.0
2Cg3 -- 55 to 80 in	fine sand	rapid	1.74 to 2.23 in	5.6 to 7.0

Map Unit Description (MN)

Crow Wing County, Minnesota

D69B--Zimmerman-Urban land complex, 0 to 6 percent slopes

Zimmerman

Extent: 25 to 75 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 6 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .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>
A -- 0 to 4 in	loamy fine sand	rapid	0.43 to 0.59 in	4.5 to 5.1
Bw1 -- 4 to 10 in	loamy fine sand	rapid	0.41 to 0.83 in	4.5 to 5.5
Bw2 -- 10 to 19 in	fine sand	rapid	0.45 to 0.72 in	5.1 to 6.5
E and Bt1 -- 19 to 23 in	fine sand	rapid	0.24 to 0.55 in	5.1 to 6.5
E and Bt2 -- 23 to 80 in	fine sand	rapid	3.43 to 6.28 in	5.1 to 6.5

Urban land

Extent: 15 to 65 percent of the unit

Landform(s): lake plains

Slope gradient: 0 to 6 percent

Parent material: fill material from surrounding uplands

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil: unranked

Hydrologic group:

Potential for frost action:

<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)

Crow Wing County, Minnesota

D70A--Barber-Urban land complex, 0 to 3 percent slopes

Barber

Extent: 35 to 65 percent of the unit

Landform(s): lake plains

Slope gradient: 0 to 3 percent

Parent material: glaciolacustrine 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): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .20

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: A/D

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	loamy fine sand	rapid	0.35 to 0.47 in	4.5 to 5.1
Bw1 -- 3 to 18 in	loamy fine sand	rapid	1.05 to 2.09 in	4.5 to 5.5
Bw2 -- 18 to 30 in	fine sand	rapid	0.59 to 0.94 in	5.1 to 6.5
Cg -- 30 to 80 in	fine sand	rapid	3.00 to 5.50 in	5.1 to 6.5

Urban land

Extent: 20 to 50 percent of the unit

Landform(s): lake plains

Slope gradient: 0 to 3 percent

Parent material: fill material from surrounding uplands

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil: unranked

Hydrologic group:

Potential for frost action:

<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)

Crow Wing County, Minnesota

D71A--Rifle, Seelyeville and Lougee soils, 0 to 1 percent slopes, ponded

Rifle, ponded

Extent: 0 to 95 percent of the unit

Landform(s): closed depressions on lake plains

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): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oi -- 0 to 12 in	peat	very rapid	6.50 to 7.68 in	
Oe -- 12 to 43 in	mucky peat	rapid	14.17 to 17.32 in	
Oa1 -- 43 to 59 in	muck	moderately rapid	5.51 to 7.09 in	
Oa2 -- 59 to 80 in	muck	moderately rapid	7.30 to 9.39 in	

Lougee, ponded

Extent: 0 to 95 percent of the unit

Landform(s): closed depressions on lake plains

Slope gradient: 0 to 1 percent

Parent material: herbaceous organic material over glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: 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>
Oi -- 0 to 3 in	peat	very rapid	1.73 to 2.05 in	
Oe -- 3 to 12 in	mucky peat	rapid	3.90 to 4.76 in	
Oa -- 12 to 28 in	muck	moderately rapid	5.51 to 7.09 in	
2A -- 28 to 31 in	mucky loamy fine sand	rapid	0.39 to 0.47 in	5.6 to 7.0
2Cg1 -- 31 to 43 in	fine sand	rapid	0.83 to 1.06 in	5.6 to 7.0
2Cg2 -- 43 to 55 in	fine sand	rapid	0.83 to 1.06 in	5.6 to 7.0
2Cg3 -- 55 to 80 in	fine sand	rapid	1.74 to 2.23 in	5.6 to 7.0

Map Unit Description (MN)

Crow Wing County, Minnesota

D71A--Rifle, Seelyeville and Lougee soils, 0 to 1 percent slopes, ponded

Seelyeville, ponded

Extent: 0 to 95 percent of the unit

Landform(s): closed depressions on lake plains

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: 8w

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>
Oa1 -- 0 to 10 in	muck	moderately rapid	3.44 to 4.72 in	
Oa2-Oa5 -- 10 to 80 in	muck	moderately rapid	24.53 to 33.64 in	

Map Unit Description (MN)

Crow Wing County, Minnesota

D72B--Graycalm-Wurtsmith complex, 2 to 8 percent slopes

Graycalm

Extent: 40 to 80 percent of the unit

Landform(s): lake plains

Slope gradient: 2 to 8 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	loamy sand	rapid	0.51 to 0.61 in	4.5 to 6.0
Bw1 -- 5 to 13 in	loamy fine sand	rapid	0.79 to 1.10 in	5.1 to 6.1
Bw2 -- 13 to 44 in	sand	rapid	1.57 to 2.20 in	5.6 to 6.4
E and Bt -- 44 to 80 in	sand	rapid	1.77 to 2.48 in	5.8 to 6.7

Wurtsmith

Extent: 10 to 40 percent of the unit

Landform(s): lake plains

Slope gradient: 2 to 5 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

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>
A -- 0 to 4 in	loamy fine sand	rapid	0.43 to 0.59 in	5.0 to 6.0
Bw -- 4 to 24 in	loamy fine sand	rapid	1.81 to 2.21 in	5.1 to 6.1
E and Bt -- 24 to 40 in	sand	rapid	0.81 to 1.13 in	5.6 to 6.6
Cg -- 40 to 80 in	sand	rapid	1.99 to 2.78 in	5.8 to 6.7

Map Unit Description (MN)

Crow Wing County, Minnesota

D73B--Wurtsmith-Meehan complex, MLRA 91A, 2 to 8 percent slopes

Wurtsmith

Extent: 35 to 55 percent of the unit

Landform(s): lake plains

Slope gradient: 2 to 8 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

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>
A -- 0 to 4 in	loamy fine sand	rapid	0.43 to 0.59 in	5.0 to 6.0
Bw -- 4 to 24 in	loamy fine sand	rapid	1.81 to 2.21 in	5.1 to 6.1
E and Bt -- 24 to 40 in	sand	rapid	0.81 to 1.13 in	5.6 to 6.6
Cg -- 40 to 80 in	sand	rapid	1.99 to 2.78 in	5.8 to 6.7

Meehan

Extent: 30 to 50 percent of the unit

Landform(s): lake plains

Slope gradient: 1 to 3 percent

Parent material: glaciolacustrine 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): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .15

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A/D

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loamy sand	rapid	0.39 to 0.47 in	5.0 to 6.0
Bw1 -- 4 to 13 in	loamy sand	rapid	0.78 to 0.95 in	5.1 to 6.1
Bw2 -- 13 to 32 in	loamy fine sand	rapid	1.77 to 2.56 in	5.6 to 6.4
Bw3 -- 32 to 40 in	fine sand	rapid	0.47 to 0.63 in	5.8 to 6.7
Bg -- 40 to 80 in	fine sand	rapid	2.39 to 3.18 in	5.8 to 6.7

Map Unit Description (MN)

Crow Wing County, Minnesota

D74B--Wurtsmith-Meehan-Beach complex, MLRA 91A, 1 to 8 percent slopes

Wurtsmith

Extent: 20 to 50 percent of the unit

Landform(s): lake plains

Slope gradient: 2 to 8 percent

Parent material: glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

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>
A -- 0 to 4 in	loamy fine sand	rapid	0.43 to 0.59 in	5.0 to 6.0
Bw -- 4 to 24 in	loamy fine sand	rapid	1.81 to 2.21 in	5.1 to 6.1
E and Bt -- 24 to 40 in	sand	rapid	0.81 to 1.13 in	5.6 to 6.6
Cg -- 40 to 80 in	sand	rapid	1.99 to 2.78 in	5.8 to 6.7

Meehan

Extent: 20 to 50 percent of the unit

Landform(s): lake plains

Slope gradient: 1 to 3 percent

Parent material: glaciolacustrine 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): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .15

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A/D

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	loamy sand	rapid	0.39 to 0.47 in	5.0 to 6.0
Bw1 -- 4 to 13 in	loamy sand	rapid	0.78 to 0.95 in	5.1 to 6.1
Bw2 -- 13 to 32 in	loamy fine sand	rapid	1.77 to 2.56 in	5.6 to 6.4
Bw3 -- 32 to 40 in	fine sand	rapid	0.47 to 0.63 in	5.8 to 6.7
Bg -- 40 to 80 in	fine sand	rapid	2.39 to 3.18 in	5.8 to 6.7

Map Unit Description (MN)

Crow Wing County, Minnesota

D74B--Wurtsmith-Meehan-Beach complex, MLRA 91A, 1 to 8 percent slopes

Beach

Extent: 20 to 40 percent of the unit

Landform(s): lake plains

Slope gradient: 1 to 3 percent

Parent material: glaciolacustrine 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): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .05

Land capability, nonirrigated: 4w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Bg -- 0 to 12 in	sand	rapid	0.47 to 1.06 in	5.1 to 6.1
Cg1 -- 12 to 20 in	sand	rapid	0.31 to 0.71 in	5.8 to 6.7
Cg2 -- 20 to 80 in	sand	rapid	2.41 to 5.42 in	5.8 to 6.7

NOTCOM--No Digital Data Available

NOTCOM

Extent: 100 percent of the unit

Landform(s):

Slope gradient:

Parent material:

Restrictive feature(s): greater than 60 inches

Flooding:

Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Crow Wing County, Minnesota

W--Water

Water

Extent: 100 percent of the unit

Landform(s):

Slope gradient: 0 to 0 percent

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.