

Map Unit Description (MN)

Cottonwood 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]

31D--Storden loam, 12 to 18 percent slopes

Storden

Extent: 97 percent of the unit
Landform(s): moraine
Slope gradient: 12 to 18 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 9 in	loam	moderate	1.8 to 2.0 in	7.4 to 8.4
H2 -- 9 to 60 in	loam	moderate	7.6 to 9.6 in	7.4 to 8.4

31E--Storden loam, 18 to 35 percent slopes

Storden

Extent: 97 percent of the unit
Landform(s): moraine
Slope gradient: 18 to 35 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 7e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 9 in	loam	moderate	1.8 to 2.0 in	7.4 to 8.4
H2 -- 9 to 60 in	loam	moderate	7.6 to 9.6 in	7.4 to 8.4

35--Blue Earth mucky silt loam

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35--Blue Earth mucky silt loam

Blue Earth

Extent: 99 percent of the unit

Landform(s): depression

Slope gradient: 0 to 1 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .28

Land capability class, nonirrigated: 3w

Hydric soil: yes

Hydrologic group: B/D

Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 11 in	mucky silt loam	moderate	2.0 to 2.6 in	7.4 to 8.4
H2 -- 11 to 44 in	mucky silt loam	moderate	6.0 to 7.9 in	7.4 to 8.4
H3 -- 44 to 60 in	loam	moderate	2.2 to 2.5 in	7.4 to 8.4

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

Estherville

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw (surface layer): .20

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: B

Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 13 in	sandy loam	moderately rapid	1.7 to 2.3 in	5.6 to 7.3
H2 -- 13 to 19 in	sandy loam	moderately rapid	0.8 to 1.1 in	5.6 to 7.3
H3 -- 19 to 60 in	gravelly coarse sand	rapid	0.8 to 1.6 in	6.6 to 8.4

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41B--Estherville sandy loam, 2 to 6 percent slopes

Estherville

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 2 to 6 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw (surface layer): .20

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: B

Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 13 in	sandy loam	moderately rapid	1.7 to 2.3 in	5.6 to 7.3
H2 -- 13 to 19 in	sandy loam	moderately rapid	0.8 to 1.1 in	5.6 to 7.3
H3 -- 19 to 60 in	gravelly coarse sand	rapid	0.8 to 1.6 in	6.6 to 8.4

41C--Estherville sandy loam, 6 to 12 percent slopes

Estherville

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 6 to 12 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw (surface layer): .20

Land capability class, nonirrigated: 4s

Hydric soil: no

Hydrologic group: B

Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 13 in	sandy loam	moderately rapid	1.7 to 2.3 in	5.6 to 7.3
H2 -- 13 to 19 in	sandy loam	moderately rapid	0.8 to 1.1 in	5.6 to 7.3
H3 -- 19 to 60 in	gravelly coarse sand	rapid	0.8 to 1.6 in	6.6 to 8.4

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41D--Estherville sandy loam, 12 to 25 percent slopes

Estherville

Extent: 99 percent of the unit

Landform(s): moraine

Slope gradient: 12 to 25 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw (surface layer): .20

Land capability class, nonirrigated: 6e

Hydric soil: no

Hydrologic group: B

Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 13 in	sandy loam	moderately rapid	1.7 to 2.3 in	5.6 to 7.3
H2 -- 13 to 19 in	sandy loam	moderately rapid	0.8 to 1.1 in	5.6 to 7.3
H3 -- 19 to 60 in	gravelly coarse sand	rapid	0.8 to 1.6 in	6.6 to 8.4

86--Canisteo clay loam

Canisteo

Extent: 99 percent of the unit

Landform(s): flat

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .24

Land capability class, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 20 in	clay loam	moderate	3.6 to 4.4 in	7.4 to 8.4
H2 -- 20 to 40 in	clay loam	moderate	3.0 to 3.8 in	7.4 to 8.4
H3 -- 40 to 60 in	loam	moderate	2.8 to 3.1 in	7.4 to 8.4

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94B--Terril loam, 2 to 6 percent slopes

Terril

Extent: 96 percent of the unit

Landform(s): moraine

Slope gradient: 2 to 6 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .24

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 24 in	loam	moderate	4.8 to 5.3 in	6.1 to 7.3
H2 -- 24 to 35 in	loam	moderate	1.9 to 2.1 in	6.1 to 7.3
H3 -- 35 to 60 in	loam	moderate	4.0 to 4.5 in	6.1 to 7.8

101B--Truman silt loam, 2 to 8 percent slopes

Truman

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 2 to 8 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .32

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 14 in	silt loam	moderate	2.8 to 3.3 in	5.6 to 7.3
H2 -- 14 to 40 in	silt loam	moderate	4.7 to 5.5 in	5.6 to 7.8
H3 -- 40 to 60 in	silt loam	moderate	3.5 to 3.9 in	7.4 to 8.4

102B--Clarion loam, 2 to 4 percent slopes

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102B--Clarion loam, 2 to 4 percent slopes

Clarion

Extent: 97 percent of the unit
Landform(s): moraine
Slope gradient: 2 to 4 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 14 in loam		moderate	2.8 to 3.1 in	5.6 to 7.3
H2 -- 14 to 30 in loam		moderate	2.7 to 3.0 in	5.6 to 7.8
H3 -- 30 to 60 in loam		moderate	5.1 to 5.7 in	7.4 to 8.4

110--Marna silty clay

Marna

Extent: 99 percent of the unit
Landform(s): flat
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: C/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 17 in silty clay		slow	3.0 to 3.7 in	6.1 to 7.3
H2 -- 17 to 36 in silty clay		slow	2.5 to 3.0 in	6.1 to 7.3
H3 -- 36 to 60 in clay loam		moderate	3.4 to 4.6 in	6.6 to 8.4

113--Webster clay loam

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113--Webster clay loam

Webster

Extent: 99 percent of the unit
Landform(s): swale
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1	-- 0 to 15 in	clay loam	moderate	2.8 to 3.1 in	6.6 to 7.3
H2	-- 15 to 38 in	clay loam	moderate	3.7 to 4.1 in	6.6 to 7.8
H3	-- 38 to 60 in	loam	moderate	3.1 to 4.2 in	7.4 to 8.4

114--Glencoe clay loam

Glencoe

Extent: 99 percent of the unit
Landform(s): depression
Slope gradient: 0 to 1 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1	-- 0 to 8 in	clay loam	moderate	1.4 to 1.7 in	6.1 to 7.8
H2	-- 8 to 44 in	clay loam	moderate	6.5 to 8.0 in	6.1 to 7.8
H3	-- 44 to 49 in	clay loam	moderate	0.7 to 0.9 in	6.6 to 7.8
H4	-- 49 to 60 in	clay loam	moderate	1.7 to 2.1 in	6.6 to 7.8

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128B--Grogan fine sandy loam, 1 to 8 percent slopes

Grogan

Extent: 98 percent of the unit
Landform(s): moraine
Slope gradient: 1 to 8 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 16 in	loam	moderately rapid	3.6 to 3.9 in	5.6 to 7.3
H2 -- 16 to 42 in	very fine sandy loam	moderately rapid	4.4 to 4.9 in	6.1 to 7.8
H3 -- 42 to 60 in	sr to loamy very fine sand to silt loam	moderately rapid	3.0 to 3.4 in	7.4 to 8.4

130--Nicollet clay loam

Nicollet

Extent: 98 percent of the unit
Landform(s): moraine
Slope gradient: 1 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 16 in	clay loam	moderate	2.7 to 3.6 in	5.6 to 7.3
H2 -- 16 to 37 in	clay loam	moderate	3.1 to 4.0 in	5.6 to 7.8
H3 -- 37 to 60 in	loam	moderate	3.2 to 4.3 in	7.4 to 8.4

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136--Madelia silty clay loam

Madelia

Extent: 99 percent of the unit
Landform(s): flat
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 7
Wind erodibility index (WEI): 38
Kw (surface layer): .28
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 22 in	silty clay loam	moderate	4.0 to 5.3 in	6.1 to 7.3
H2 -- 22 to 33 in	silty clay loam	moderate	1.8 to 2.4 in	6.6 to 7.8
H3 -- 33 to 48 in	silt loam	moderate	2.4 to 3.3 in	7.4 to 8.4
H4 -- 48 to 60 in	loam	moderate	2.0 to 2.2 in	7.4 to 8.4

140--Spicer silt loam

Spicer

Extent: 99 percent of the unit
Landform(s): flat
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 18 in	silt loam	moderate	3.3 to 4.3 in	7.4 to 8.4
H2 -- 18 to 43 in	silt loam	moderate	4.0 to 5.5 in	7.4 to 8.4
H3 -- 43 to 60 in	silt loam	moderate	2.7 to 3.7 in	7.4 to 8.4

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149B--Everly clay loam, 2 to 6 percent slopes

Everly

Extent: 98 percent of the unit
Landform(s): moraine
Slope gradient: 2 to 6 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 17 in	clay loam	moderate	2.9 to 3.2 in	5.6 to 7.3
H2 -- 17 to 36 in	clay loam	moderate	2.8 to 3.2 in	6.1 to 7.3
H3 -- 36 to 60 in	clay loam	moderately slow	4.1 to 4.6 in	7.4 to 8.4

154--Blue Earth muck

Blue Earth

Extent: 99 percent of the unit
Landform(s): depression
Slope gradient: 0 to 1 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw (surface layer): .02
Land capability class, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 8 in	muck	moderately rapid	2.8 to 3.8 in	7.4 to 8.4
H2 -- 8 to 56 in	mucky silty clay loam	moderate	8.6 to 11.5 in	7.4 to 8.4
H3 -- 56 to 60 in	silty clay loam	moderate	0.6 to 0.6 in	7.4 to 8.4

197--Kingston silt loam

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197--Kingston silt loam

Kingston

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .28

Land capability class, nonirrigated: 1

Hydric soil: no

Hydrologic group: B

Potential frost action: high

Representative soil profile:

	<i>Texture</i>
H1 -- 0 to 20 in	silt loam
H2 -- 20 to 38 in	silt loam
H3 -- 38 to 60 in	silt loam

Texture

Permeability

moderate
moderate
moderate

Available water

capacity

3.6 to 4.8 in
2.8 to 3.5 in
3.5 to 4.4 in

pH

5.6 to 7.3
5.6 to 7.8
7.4 to 8.4

211--Lura silty clay

Lura

Extent: 99 percent of the unit

Landform(s): depression

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .28

Land capability class, nonirrigated: 3w

Hydric soil: yes

Hydrologic group: C/D

Potential frost action: high

Representative soil profile:

	<i>Texture</i>
H1 -- 0 to 10 in	silty clay
H2 -- 10 to 52 in	silty clay
H3 -- 52 to 60 in	silty clay

Texture

Permeability

slow
slow
moderately slow

Available water

capacity

1.4 to 1.7 in
5.9 to 7.2 in
0.9 to 1.5 in

pH

6.1 to 7.8
6.1 to 7.3
6.6 to 7.8

214--Talcot silty clay loam

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214--Talcot silty clay loam

Talcot

Extent: 99 percent of the unit

Landform(s): depression

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw (surface layer): .28

Land capability class, nonirrigated: 3w

Hydric soil: yes

Hydrologic group: B/D

Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 22 in	silty clay loam	moderate	4.0 to 4.9 in	7.4 to 8.4
H2 -- 22 to 36 in	clay loam	moderate	2.3 to 2.8 in	7.4 to 8.4
H3 -- 36 to 60 in	stratified gravelly coarse sand to loamy sand	rapid	0.5 to 1.0 in	7.4 to 8.4

230--Guckeen silty clay loam

Guckeen

Extent: 97 percent of the unit

Landform(s): moraine

Slope gradient: 1 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .37

Land capability class, nonirrigated: 2w

Hydric soil: no

Hydrologic group: C

Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 21 in	silty clay loam	moderately slow	3.3 to 4.0 in	5.6 to 7.3
H2 -- 21 to 34 in	silty clay	moderately slow	1.7 to 2.1 in	5.6 to 7.3
H3 -- 34 to 60 in	clay loam	moderately slow	3.9 to 4.4 in	6.6 to 8.4

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

241--Letri clay loam

Letri

Extent: 99 percent of the unit
Landform(s): swale
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 19 in	clay loam	moderate	3.4 to 4.2 in	6.1 to 7.8
H2 -- 19 to 26 in	clay loam	moderate	1.1 to 1.3 in	6.1 to 7.8
H3 -- 26 to 60 in	clay loam	moderately slow	5.8 to 6.4 in	6.6 to 8.4

247--Linder loam

Linder

Extent: 98 percent of the unit
Landform(s): moraine
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw (surface layer): .24
Land capability class, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 16 in	loam	moderate	3.2 to 3.6 in	5.6 to 7.8
H2 -- 16 to 33 in	sandy loam	moderately rapid	2.5 to 2.9 in	6.1 to 7.8
H3 -- 33 to 60 in	gravelly loamy coarse sand	very rapid	0.5 to 1.1 in	7.4 to 8.4

255--Mayer loam

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

255--Mayer loam

Mayer

Extent: 99 percent of the unit
Landform(s): flat
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 17 in	loam	moderate	3.4 to 3.7 in	7.4 to 8.4
H2 -- 17 to 40 in	sandy clay loam	moderate	3.7 to 4.4 in	7.4 to 8.4
H3 -- 40 to 60 in	gravelly coarse sand	rapid	0.4 to 0.8 in	7.4 to 8.4

269--Millington silty clay loam

Millington

Extent: 99 percent of the unit
Landform(s): flood plain
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
Flooding: occasional
Ponding: none
Drainage class: poorly drained

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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 30 in	silty clay loam	moderate	5.1 to 6.9 in	7.4 to 8.4
H2 -- 30 to 48 in	loam	moderate	3.1 to 3.6 in	7.4 to 8.4
H3 -- 48 to 60 in	sr to sandy loam to silty clay	moderate	1.7 to 2.4 in	7.4 to 8.4

291--Ransom silty clay loam

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

291--Ransom silty clay loam

Ransom

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 1 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Wind erodibility index (WEI): 38

Kw (surface layer): .32

Land capability class, nonirrigated: 1

Hydric soil: no

Hydrologic group: B

Potential frost action: high

Representative soil profile:

Texture

H1 --	0 to 14 in	silty clay loam
H2 --	14 to 35 in	silty clay loam
H3 --	35 to 60 in	loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderate	2.6 to 3.1 in	6.6 to 7.3
moderate	3.3 to 4.0 in	6.6 to 7.8
moderately slow	5.0 to 5.5 in	7.4 to 8.4

304--Rushmore silty clay loam

Rushmore

Extent: 99 percent of the unit

Landform(s): swale

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 7

Wind erodibility index (WEI): 38

Kw (surface layer): .28

Land capability class, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential frost action: high

Representative soil profile:

Texture

H1 --	0 to 19 in	silty clay loam
H2 --	19 to 31 in	silty clay loam
H3 --	31 to 60 in	loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderate	3.4 to 4.2 in	6.1 to 7.8
moderate	2.0 to 2.3 in	6.6 to 8.4
moderately slow	4.0 to 4.6 in	7.4 to 8.4

313--Spillville loam, occassionally flooded

This report shows only the major soils in each map unit. Others may exist.

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Map Unit Description (MN)

Cottonwood 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]

313--Spillville loam, occasionally flooded

Spillville

Extent: 99 percent of the unit

Landform(s): moraine

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: occasional

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw (surface layer): .24

Land capability class, nonirrigated: 2w

Hydric soil: no

Hydrologic group: B

Potential frost action: moderate

Representative soil profile:

Texture

H1 -- 0 to 45 in loam
H2 -- 45 to 60 in loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderate	8.5 to 9.4 in	5.6 to 7.3
moderately rapid	2.2 to 2.7 in	5.6 to 7.3

319--Barbert silt loam

Barbert

Extent: 99 percent of the unit

Landform(s): depression

Slope gradient: 0 to 1 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .28

Land capability class, nonirrigated: 3w

Hydric soil: yes

Hydrologic group: D

Potential frost action: high

Representative soil profile:

Texture

H1 -- 0 to 23 in silt loam
H2 -- 23 to 54 in silty clay loam
H3 -- 54 to 60 in silty clay loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderate	5.0 to 5.5 in	5.1 to 6.5
moderate	6.8 to 7.5 in	5.1 to 6.5
moderately slow	0.9 to 1.1 in	6.6 to 7.8

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

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

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

Dickman

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw (surface layer): .20

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

H1 --	0 to 15 in	sandy loam
H2 --	15 to 25 in	loamy sand
H3 --	25 to 60 in	sand

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderately rapid	1.9 to 2.2 in	5.6 to 6.5
moderately rapid	1.2 to 1.4 in	5.6 to 7.3
rapid	0.7 to 2.4 in	5.6 to 7.8

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

Dickman

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 2 to 6 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw (surface layer): .20

Land capability class, nonirrigated: 3e

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

H1 --	0 to 15 in	sandy loam
H2 --	15 to 25 in	loamy sand
H3 --	25 to 60 in	sand

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderately rapid	1.9 to 2.2 in	5.6 to 6.5
moderately rapid	1.2 to 1.4 in	5.6 to 7.3
rapid	0.7 to 2.4 in	5.6 to 7.8

This report shows only the major soils in each map unit. Others may exist.

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Map Unit Description (MN)

Cottonwood 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]

327C--Dickman sandy loam, 6 to 12 percent slopes

Dickman

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 6 to 12 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw (surface layer): .20

Land capability class, nonirrigated: 4e

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

H1 --	0 to 15 in	sandy loam
H2 --	15 to 25 in	loamy sand
H3 --	25 to 60 in	sand

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderately rapid	1.9 to 2.2 in	5.6 to 6.5
moderately rapid	1.2 to 1.4 in	5.6 to 7.3
rapid	0.7 to 2.4 in	5.6 to 7.8

345--Wilmonton clay loam

Wilmonton

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 1 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .28

Land capability class, nonirrigated: 1

Hydric soil: no

Hydrologic group: B

Potential frost action: high

Representative soil profile:

Texture

H1 --	0 to 22 in	clay loam
H2 --	22 to 37 in	clay loam
H3 --	37 to 60 in	clay loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderate	4.4 to 5.7 in	6.1 to 7.3
moderately slow	2.2 to 2.8 in	6.1 to 7.8
moderately slow	3.2 to 4.3 in	7.4 to 8.4

This report shows only the major soils in each map unit. Others may exist.

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Map Unit Description (MN)

Cottonwood 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]

392--Biscay loam

Biscay

Extent: 99 percent of the unit
Landform(s): flat
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw (surface layer): .28
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 20 in	loam	moderate	4.0 to 4.4 in	6.1 to 7.8
H2 -- 20 to 32 in	loam	moderate	2.0 to 2.2 in	6.6 to 7.8
H3 -- 32 to 39 in	gravelly sandy loam	moderately rapid	0.8 to 1.2 in	6.6 to 7.8
H4 -- 39 to 60 in	stratified very gravelly coarse sand to loamy sand	rapid	0.4 to 0.8 in	7.4 to 8.4

421B--Ves loam, 2 to 6 percent slopes

Ves

Extent: 97 percent of the unit
Landform(s): moraine
Slope gradient: 2 to 6 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 16 in	loam	moderate	2.7 to 3.6 in	6.1 to 7.3
H2 -- 16 to 32 in	loam	moderate	2.4 to 3.0 in	6.1 to 7.3
H3 -- 32 to 40 in	loam	moderate	1.2 to 1.6 in	7.4 to 8.4
H4 -- 40 to 60 in	loam	moderate	3.0 to 3.7 in	7.4 to 8.4

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

421B--Ves loam, 2 to 6 percent slopes

446--Normania loam

Normania

Extent: 97 percent of the unit

Landform(s): moraine

Slope gradient: 1 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .24

Land capability class, nonirrigated: 1

Hydric soil: no

Hydrologic group: B

Potential frost action: high

Representative soil profile:

Texture

H1	--	0 to 18 in	loam
H2	--	18 to 25 in	loam
H3	--	25 to 48 in	loam
H4	--	48 to 60 in	loam

Permeability

Available water capacity

pH

moderate	3.6 to 4.0 in	6.1 to 7.3
moderate	1.1 to 1.3 in	6.6 to 7.8
moderate	3.4 to 4.3 in	7.4 to 8.4
moderate	1.8 to 2.2 in	7.4 to 8.4

588B--Clarion variant loam, 2 to 6 percent slopes

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

588B--Clarion variant loam, 2 to 6 percent slopes

Clarion variant

Extent: 98 percent of the unit
Landform(s): moraine
Slope gradient: 2 to 6 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 18 in loam		moderate	3.6 to 4.3 in	6.1 to 7.3
H2 -- 18 to 30 in loam		moderate	2.1 to 2.6 in	5.6 to 7.3
H3 -- 30 to 60 in loam		moderately slow	5.1 to 5.7 in	7.4 to 8.4

589--Romnell clay loam

Romnell

Extent: 99 percent of the unit
Landform(s): flat
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 10 in clay loam		moderate	1.7 to 2.4 in	6.6 to 7.8
H2 -- 10 to 18 in clay loam		moderate	1.4 to 2.0 in	6.6 to 7.8
H3 -- 18 to 43 in clay loam		moderately slow	3.7 to 4.7 in	6.6 to 7.8
H4 -- 43 to 60 in clay loam		moderately slow	2.4 to 3.2 in	7.4 to 8.4

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

590B--Jeffers variant clay loam, 2 to 4 percent slopes

Jeffers variant

Extent: 98 percent of the unit

Landform(s): moraine

Slope gradient: 2 to 4 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .24

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 16 in	clay loam	moderate	3.1 to 3.6 in	7.4 to 8.4
H2 -- 16 to 29 in	clay loam	moderate	2.2 to 2.9 in	7.4 to 8.4
H3 -- 29 to 60 in	loam	moderately slow	4.6 to 5.8 in	7.4 to 8.4

594--Jeffers clay loam

Jeffers

Extent: 99 percent of the unit

Landform(s): flat

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .24

Land capability class, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 16 in	clay loam	moderate	2.7 to 3.1 in	7.4 to 8.4
H2 -- 16 to 30 in	clay loam	moderate	2.1 to 2.6 in	7.4 to 8.4
H3 -- 30 to 60 in	loam	moderately slow	4.2 to 5.7 in	7.4 to 8.4

595B--Swanlake loam, 2 to 6 percent slopes

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

595B--Swanlake loam, 2 to 6 percent slopes

Swanlake

Extent: 97 percent of the unit
Landform(s): moraine
Slope gradient: 2 to 6 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 9 in loam		moderate	1.8 to 2.2 in	7.4 to 8.4
H2 -- 9 to 43 in loam		moderate	5.8 to 6.4 in	7.4 to 8.4
H3 -- 43 to 60 in loam		moderate	2.9 to 3.2 in	7.4 to 8.4

595C--Swanlake loam, 6 to 12 percent slopes

Swanlake

Extent: 97 percent of the unit
Landform(s): moraine
Slope gradient: 6 to 12 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 9 in loam		moderate	1.8 to 2.2 in	7.4 to 8.4
H2 -- 9 to 43 in loam		moderate	5.8 to 6.4 in	7.4 to 8.4
H3 -- 43 to 60 in loam		moderate	2.9 to 3.2 in	7.4 to 8.4

884--Webster-Delft clay loams

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

884--Webster-Delft clay loams

Webster

Extent: 60 percent of the unit
Landform(s): swale
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 15 in	clay loam	moderate	2.8 to 3.1 in	6.6 to 7.3
H2 -- 15 to 38 in	clay loam	moderate	3.7 to 4.1 in	6.6 to 7.8
H3 -- 38 to 60 in	loam	moderate	3.1 to 4.2 in	7.4 to 8.4

Delft

Extent: 39 percent of the unit
Landform(s): swale
Slope gradient: 1 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 12 in	clay loam	moderately slow	2.1 to 2.4 in	5.6 to 7.8
H2 -- 12 to 29 in	loam	moderate	3.3 to 3.8 in	5.6 to 7.8
H3 -- 29 to 46 in	loam	moderate	3.2 to 3.7 in	6.6 to 7.8
H4 -- 46 to 60 in	loam	moderate	2.1 to 2.6 in	7.4 to 8.4

885B--Swanlake-Salida complex, 2 to 6 percent slopes

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

885B--Swanlake-Salida complex, 2 to 6 percent slopes

Swanlake

Extent: 70 percent of the unit
Landform(s): moraine
Slope gradient: 2 to 6 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 9 in loam		moderate	1.8 to 2.2 in	7.4 to 8.4
H2 -- 9 to 43 in loam		moderate	5.8 to 6.4 in	7.4 to 8.4
H3 -- 43 to 60 in loam		moderate	2.9 to 3.2 in	7.4 to 8.4

Salida

Extent: 27 percent of the unit
Landform(s): moraine
Slope gradient: 2 to 6 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw (surface layer): .10
Land capability class, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 7 in gravelly sandy loam		moderately rapid	0.7 to 0.9 in	6.1 to 8.4
H2 -- 7 to 17 in gravelly loamy coarse sand		very rapid	0.2 to 0.4 in	7.4 to 8.4
H3 -- 17 to 60 in very gravelly coarse sand		very rapid	0.9 to 1.7 in	7.4 to 8.4

885C--Swanlake-Salida complex, 6 to 12 percent slopes

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

885C--Swanlake-Salida complex, 6 to 12 percent slopes

Swanlake

Extent: 70 percent of the unit
Landform(s): moraine
Slope gradient: 6 to 12 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 9 in	loam	moderate	1.8 to 2.2 in	7.4 to 8.4
H2 -- 9 to 43 in	loam	moderate	5.8 to 6.4 in	7.4 to 8.4
H3 -- 43 to 60 in	loam	moderate	2.9 to 3.2 in	7.4 to 8.4

Salida

Extent: 27 percent of the unit
Landform(s): moraine
Slope gradient: 6 to 12 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw (surface layer): .10
Land capability class, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 7 in	gravelly sandy loam	moderately rapid	0.7 to 0.9 in	6.1 to 8.4
H2 -- 7 to 17 in	gravelly loamy coarse sand	very rapid	0.2 to 0.4 in	7.4 to 8.4
H3 -- 17 to 60 in	very gravelly coarse sand	very rapid	0.9 to 1.7 in	7.4 to 8.4

886--Nicollet-Crippin clay loams

This report shows only the major soils in each map unit. Others may exist.

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Map Unit Description (MN)

Cottonwood 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]

886--Nicollet-Crippin clay loams

Nicollet

Extent: 60 percent of the unit

Landform(s): moraine

Slope gradient: 1 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .24

Land capability class, nonirrigated: 1

Hydric soil: no

Hydrologic group: B

Potential frost action: high

Representative soil profile:

Texture

H1 --	0 to 16 in	clay loam
H2 --	16 to 37 in	clay loam
H3 --	37 to 60 in	loam

Permeability

moderate
moderate
moderate

Available water

capacity *pH*

2.7 to 3.6 in	5.6 to 7.3
3.1 to 4.0 in	5.6 to 7.8
3.2 to 4.3 in	7.4 to 8.4

Crippin

Extent: 37 percent of the unit

Landform(s): moraine

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .24

Land capability class, nonirrigated: 1

Hydric soil: no

Hydrologic group: B

Potential frost action: high

Representative soil profile:

Texture

H1 --	0 to 17 in	clay loam
H2 --	17 to 31 in	clay loam
H3 --	31 to 60 in	loam

Permeability

moderate
moderate
moderate

Available water

capacity *pH*

3.4 to 3.7 in	6.6 to 8.4
2.4 to 2.7 in	7.4 to 8.4
4.9 to 5.5 in	7.9 to 8.4

887B--Clarion-Swanlake loams, 3 to 6 percent slopes

This report shows only the major soils in each map unit. Others may exist.

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Map Unit Description (MN)

Cottonwood 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]

887B--Clarion-Swanlake loams, 3 to 6 percent slopes

Clarion

Extent: 65 percent of the unit
Landform(s): moraine
Slope gradient: 3 to 6 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 14 in loam		moderate	2.8 to 3.1 in	5.6 to 7.3
H2 -- 14 to 30 in loam		moderate	2.7 to 3.0 in	5.6 to 7.8
H3 -- 30 to 60 in loam		moderate	5.1 to 5.7 in	7.4 to 8.4

Swanlake

Extent: 32 percent of the unit
Landform(s): moraine
Slope gradient: 3 to 6 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 9 in loam		moderate	1.8 to 2.2 in	7.4 to 8.4
H2 -- 9 to 43 in loam		moderate	5.8 to 6.4 in	7.4 to 8.4
H3 -- 43 to 60 in loam		moderate	2.9 to 3.2 in	7.4 to 8.4

887C--Clarion-Swanlake loams, 6 to 12 percent slopes

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

887C--Clarion-Swanlake loams, 6 to 12 percent slopes

Clarion

Extent: 65 percent of the unit
Landform(s): moraine
Slope gradient: 6 to 12 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 14 in loam		moderate	2.8 to 3.1 in	5.6 to 7.3
H2 -- 14 to 30 in loam		moderate	2.7 to 3.0 in	5.6 to 7.3
H3 -- 30 to 60 in loam		moderate	5.1 to 5.7 in	7.4 to 8.4

Swanlake

Extent: 32 percent of the unit
Landform(s): moraine
Slope gradient: 6 to 12 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .28
Land capability class, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water</i>	
			<i>capacity</i>	<i>pH</i>
H1 -- 0 to 9 in loam		moderate	1.8 to 2.2 in	7.4 to 8.4
H2 -- 9 to 43 in loam		moderate	5.8 to 6.4 in	7.4 to 8.4
H3 -- 43 to 60 in loam		moderate	2.9 to 3.2 in	7.4 to 8.4

961D--Storden-Salida complex, 12 to 25 percent slopes

This report shows only the major soils in each map unit. Others may exist.

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Map Unit Description (MN)

Cottonwood 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]

961D--Storden-Salida complex, 12 to 25 percent slopes

Storden

Extent: 70 percent of the unit

Landform(s): moraine

Slope gradient: 12 to 25 percent

Parent material:

Restrictive feature(s):

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 (surface layer): .28

Land capability class, nonirrigated: 6e

Hydric soil: no

Hydrologic group: B

Potential frost action: moderate

Representative soil profile:

Texture

H1 --	0 to 9 in	loam
H2 --	9 to 60 in	loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderate	1.8 to 2.0 in	7.4 to 8.4
moderate	7.6 to 9.6 in	7.4 to 8.4

Salida

Extent: 27 percent of the unit

Landform(s): moraine

Slope gradient: 12 to 25 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw (surface layer): .10

Land capability class, nonirrigated: 7s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

H1 --	0 to 7 in	gravelly sandy loam
H2 --	7 to 17 in	gravelly loamy coarse sand
H3 --	17 to 60 in	very gravelly coarse sand

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderately rapid	0.7 to 0.9 in	6.1 to 8.4
very rapid	0.2 to 0.4 in	7.4 to 8.4
very rapid	0.9 to 1.7 in	7.4 to 8.4

1029--Pits, gravel

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

1029--Pits, gravel

Pits, gravel

Extent: 100 percent of the unit

Landform(s): moraine

Slope gradient:

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw (surface layer):

Land capability class, nonirrigated:

Hydric soil:

Hydrologic group:

Potential 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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1053--Aquolls and Aquepts, ponded

Aquolls

Extent: 60 percent of the unit

Landform(s): depression

Slope gradient:

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: frequent

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw (surface layer):

Land capability class, nonirrigated:

Hydric soil: yes

Hydrologic group: D

Potential 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 shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

1053--Aquolls and Aquent, ponded

Aquents

Extent: 40 percent of the unit
Landform(s): depression
Slope gradient:
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw (surface layer):
Land capability class, nonirrigated:
Hydric soil: yes
Hydrologic group: D
Potential 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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1833--Coland clay loam, occasionally flooded

Coland

Extent: 99 percent of the unit
Landform(s): flood plain
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 42 in	clay loam	moderate	8.4 to 9.3 in	6.1 to 7.3
H2 -- 42 to 60 in	clay loam	moderate	3.5 to 3.9 in	6.1 to 7.3

1834--Coland clay loam, frequently flooded

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

1834--Coland clay loam, frequently flooded

Coland

Extent: 99 percent of the unit
Landform(s): flood plain
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
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 (surface layer): .24
Land capability class, nonirrigated: 5w
Hydric soil: yes
Hydrologic group: B/D
Potential frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 42 in	clay loam	moderate	8.4 to 9.3 in	6.1 to 7.3
H2 -- 42 to 60 in	clay loam	moderate	3.5 to 3.9 in	6.1 to 7.3

1835B--Germantown clay loam, 1 to 6 percent slopes

Germantown

Extent: 98 percent of the unit
Landform(s): moraine
Slope gradient: 1 to 6 percent
Parent material:
Restrictive feature(s): bedrock (lithic) at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

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

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
H1 -- 0 to 8 in	clay loam	moderate	1.4 to 1.7 in	5.6 to 6.5
H2 -- 8 to 27 in	clay loam	moderately slow	3.0 to 3.6 in	5.1 to 8.4
H3 -- 27 to 36 in	loam	moderately slow	1.5 to 1.7 in	7.4 to 8.4
H4 -- 36 to 40 in	unweathered bedrock	rapid		

1836B--Germantown-Rock outcrop complex, 2 to 6 percent slopes

This report shows only the major soils in each map unit. Others may exist.

Map Unit Description (MN)

Cottonwood 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]

1836B--Germantown-Rock outcrop complex, 2 to 6 percent slopes

Germantown

Extent: 55 percent of the unit

Landform(s): moraine

Slope gradient: 2 to 6 percent

Parent material:

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

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw (surface layer): .28

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential frost action: moderate

Representative soil profile:

Texture

H1 --	0 to 8 in	clay loam
H2 --	8 to 27 in	clay loam
H3 --	27 to 36 in	loam
H4 --	36 to 40 in	unweathered bedrock

Available water

<i>Permeability</i>	<i>capacity</i>	<i>pH</i>
moderate	1.4 to 1.7 in	5.6 to 6.5
moderately slow	3.0 to 3.6 in	5.1 to 8.4
moderately slow	1.5 to 1.7 in	7.4 to 8.4
rapid		

Rock outcrop

Extent: 43 percent of the unit

Landform(s): moraine

Slope gradient:

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw (surface layer):

Land capability class, nonirrigated:

Hydric soil:

Hydrologic group:

Potential frost action:

Representative soil profile:

Texture

<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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1837--Webster variant clay loam

This report shows only the major soils in each map unit. Others may exist.

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Map Unit Description (MN)

Cottonwood 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]

1837--Webster variant clay loam

Webster variant

Extent: 99 percent of the unit

Landform(s): swale

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): bedrock (lithic) at 10 to 20 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw (surface layer): .24

Land capability class, nonirrigated: 5w

Hydric soil: yes

Hydrologic group: B/D

Potential frost action: high

Representative soil profile:

Texture

H1 --	0 to 9 in	clay loam
H2 --	9 to 19 in	clay loam
H3 --	19 to 23 in	unweathered bedrock

Permeability

moderate
moderate
rapid

Available water

capacity

1.5 to 1.9 in
1.5 to 1.9 in

pH

5.1 to 6.5
5.1 to 7.3

W--Water

Water

Extent: 100 percent of the unit

Landform(s):

Slope gradient:

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw (surface layer):

Land capability class, nonirrigated:

Hydric soil:

Hydrologic group:

Potential frost action:

Representative soil profile:

Texture

Permeability

Available water

capacity

pH

This report provides a semi tabular listing of some soil and site properties and interpretations valuable in communicating the concept of a map unit. It also includes commonly used conservation planning information in one place for easy access. Major soil components are always displayed and minor components are also displayed if they are included in the database and they are selected at the time the report is generated.

This report shows only the major soils in each map unit. Others may exist.

Tabular Data Version: 3

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