

Map Unit Description (MN)

Benton 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]

7A--Hubbard loamy sand, 0 to 2 percent slopes

Hubbard

Extent: 95 percent of the unit

Landform(s): stream terraces, outwash plains

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

outwash *Kw (surface layer):* .15

Land capability class, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

Ap,A --	0 to 16 in	loamy sand
Bw --	16 to 38 in	sand
C --	38 to 60 in	coarse sand

Permeability

Available water

capacity

pH

rapid	1.3 to 1.9 in	5.1 to 7.3
rapid	0.7 to 1.5 in	5.1 to 7.3
rapid	0.6 to 1.5 in	5.6 to 7.8

7B--Hubbard loamy sand, 2 to 6 percent slopes

Hubbard

Extent: 95 percent of the unit

Landform(s): stream terraces, outwash plains

Slope gradient: 2 to 6 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

outwash *Kw (surface layer):* .15

Land capability class, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

Ap,A --	0 to 14 in	loamy sand
Bw --	14 to 36 in	sand
C --	36 to 60 in	coarse sand

Permeability

Available water

capacity

pH

rapid	1.1 to 1.7 in	5.1 to 7.3
rapid	0.6 to 1.5 in	5.1 to 7.3
rapid	0.7 to 1.7 in	5.6 to 7.8

12E--Emmert gravelly coarse sandy loam, 6 to 25 percent slopes

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12E--Emmert gravelly coarse sandy loam, 6 to 25 percent slopes

Emmert

Extent: 95 percent of the unit

Landform(s): eskers

Slope gradient: 6 to 25 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

outwash *Kw (surface layer):* .17

Land capability class, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential 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 1 in	gravelly coarse sandy loam	rapid	0.1 to 0.2 in	5.1 to 6.5
Bw -- 1 to 5 in	gravelly loamy coarse sand	rapid	0.2 to 0.4 in	5.1 to 6.5
C -- 5 to 60 in	very gravelly coarse sand	very rapid	1.1 to 2.2 in	5.1 to 7.3

13--Adolph silt loam, 0 to 2 percent slopes

Adolph

Extent: 90 percent of the unit

Landform(s): flats on interdrumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 3w

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 capacity</i>	<i>pH</i>
A1 -- 0 to 9 in	silt loam	moderate	1.6 to 1.8 in	5.6 to 7.3
A2 -- 9 to 12 in	silt loam	moderate	0.5 to 0.7 in	5.6 to 7.3
Bg -- 12 to 30 in	very fine sandy loam	moderate	3.1 to 4.0 in	5.6 to 7.3
2BC -- 30 to 44 in	sandy loam	slow	1.0 to 1.8 in	5.6 to 7.8
2Cd -- 44 to 60 in	sandy loam	very slow	0.6 to 1.3 in	5.6 to 7.8

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13--Adolph silt loam, 0 to 2 percent slopes

14--Adolph silt loam, depressional, 0 to 1 percent slopes

Adolph, depressional

Extent: 90 percent of the unit

Landform(s): depressions on interdrumlins

Slope gradient: 0 to 1 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: C/D

Potential frost action: high

Representative soil profile:

Texture

A1 --	0 to 5 in	silt loam
A2 --	5 to 14 in	silt loam
Bg --	14 to 31 in	very fine sandy loam
2BC --	31 to 45 in	sandy loam
2Cd --	45 to 60 in	sandy loam

Permeability

moderate
moderate
moderate
slow
very slow

Available water

capacity

0.9 to 1.2 in
1.6 to 2.2 in
2.9 to 3.7 in
1.0 to 1.8 in
0.6 to 1.2 in

pH

5.6 to 7.3
5.6 to 7.3
5.6 to 7.3
5.6 to 7.8
5.6 to 7.8

38B--Waukon fine sandy loam, 2 to 6 percent slopes

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38B--Waukon fine sandy loam, 2 to 6 percent slopes

Waukon

Extent: 95 percent of the unit
Landform(s): drumlins
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): 3
Wind erodibility index (WEI): 86
 till *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 capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	fine sandy loam	moderately rapid	1.0 to 1.2 in	6.1 to 7.3
Bt -- 8 to 43 in	loam	moderate	5.3 to 6.7 in	6.1 to 8.4
Bk -- 43 to 80 in	loam	moderate	5.6 to 7.0 in	7.4 to 8.4

119C--Pomroy loamy fine sand, 6 to 12 percent slopes

Pomroy

Extent: 90 percent of the unit
Landform(s): drumlins
Slope gradient: 6 to 12 percent
Parent material:
Restrictive feature(s): dense material at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
 outwash over till *Kw (surface layer):* .15
Land capability class, nonirrigated: 4s
Hydric soil: no
Hydrologic group: C
Potential 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	0.6 to 0.7 in	5.1 to 6.5
E -- 6 to 22 in	fine sand	rapid	1.0 to 1.5 in	5.1 to 6.5
2Bt -- 22 to 31 in	sandy loam	moderate	1.0 to 1.6 in	5.1 to 6.5
2BC -- 31 to 41 in	sandy loam	slow	0.8 to 1.2 in	5.6 to 7.3
2Cd -- 41 to 60 in	sandy loam	very slow	0.8 to 1.5 in	5.6 to 7.3

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119C--Pomroy loamy fine sand, 6 to 12 percent slopes

142--Nokay fine sandy loam, 0 to 2 percent slopes

Nokay

Extent: 90 percent of the unit

Landform(s): interdrumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .24

Land capability class, nonirrigated: 2w

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

Ap --	0 to 7 in	fine sandy loam
E --	7 to 16 in	fine sandy loam
Bt --	16 to 22 in	fine sandy loam
BC --	22 to 40 in	sandy loam
Cd --	40 to 60 in	sandy loam

<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
moderately rapid	0.9 to 1.3 in	4.5 to 5.5
moderately rapid	1.1 to 1.7 in	4.5 to 5.5
moderate	0.7 to 1.1 in	5.1 to 6.5
slow	1.4 to 2.2 in	5.6 to 7.3
very slow	0.8 to 1.6 in	5.6 to 7.3

144B--Flak sandy loam, 3 to 6 percent slopes

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144B--Flak sandy loam, 3 to 6 percent slopes

Flak

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 6 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

Representative soil profile:

Texture

Ap --	0 to 7 in	sandy loam
E --	7 to 14 in	sandy loam
B/E,Bt --	14 to 29 in	sandy loam
BC --	29 to 42 in	sandy loam
Cd --	42 to 60 in	sandy loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderately rapid	0.9 to 1.3 in	4.5 to 6.5
moderately rapid	0.9 to 1.1 in	5.1 to 6.5
moderate	1.8 to 2.4 in	5.1 to 6.5
slow	1.0 to 1.6 in	5.1 to 7.3
very slow	0.7 to 1.4 in	5.6 to 7.3

144C--Flak sandy loam, 6 to 12 percent slopes

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144C--Flak sandy loam, 6 to 12 percent slopes

Flak

Extent: 95 percent of the unit

Landform(s): drumlins

Slope gradient: 6 to 12 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 3e

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

Representative soil profile:

Texture

Ap --	0 to 7 in	sandy loam
E --	7 to 11 in	sandy loam
B/E,Bt --	11 to 26 in	sandy loam
BC --	26 to 41 in	sandy loam
Cd --	41 to 60 in	sandy loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderately rapid	0.9 to 1.3 in	4.5 to 6.5
moderately rapid	0.5 to 0.6 in	5.1 to 6.5
moderate	1.8 to 2.4 in	5.1 to 6.5
slow	1.2 to 1.8 in	5.1 to 7.3
very slow	0.8 to 1.5 in	5.6 to 7.3

147--Spoooner silt loam, 0 to 2 percent slopes

Spoooner

Extent: 95 percent of the unit

Landform(s): flats on lake plains

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): 5

Wind erodibility index (WEI): 56

lacustrine sediments *Kw (surface layer):* .37

Land capability class, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 7 in	silt loam
E --	7 to 11 in	silt loam
Btg --	11 to 26 in	silty clay loam
Cg --	26 to 60 in	silt loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderate	1.4 to 1.7 in	5.6 to 7.8
moderately rapid	0.7 to 0.7 in	5.6 to 7.8
moderate	2.5 to 3.3 in	6.1 to 7.8
moderate	5.8 to 7.4 in	7.4 to 8.4

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147--Spooner silt loam, 0 to 2 percent slopes

152B--Milaca fine sandy loam, 3 to 6 percent slopes

Milaca

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 6 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .15

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

Representative soil profile:

Texture

A --	0 to 6 in	fine sandy loam
E --	6 to 10 in	fine sandy loam
Bt,BC --	10 to 45 in	fine sandy loam
Cd --	45 to 80 in	fine sandy loam

Permeability

moderately rapid
moderately rapid
moderately rapid
very slow

Available water

capacity

0.8 to 1.1 in
0.4 to 0.7 in
3.5 to 6.7 in
1.4 to 2.8 in

pH

5.1 to 6.5
5.1 to 6.5
5.1 to 6.5
5.6 to 7.3

152C--Milaca fine sandy loam, 6 to 12 percent slopes

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152C--Milaca fine sandy loam, 6 to 12 percent slopes

Milaca

Extent: 95 percent of the unit

Landform(s): drumlins

Slope gradient: 6 to 12 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .15

Land capability class, nonirrigated: 3e

Hydric soil: no

Hydrologic group: C

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>
A -- 0 to 4 in	fine sandy loam	moderately rapid	0.6 to 0.7 in	5.1 to 6.5
E -- 4 to 12 in	fine sandy loam	moderately rapid	0.9 to 1.5 in	5.1 to 6.5
Bt,BC -- 12 to 42 in	fine sandy loam	moderately rapid	3.0 to 5.8 in	5.1 to 6.5
Cd -- 42 to 80 in	fine sandy loam	very slow	1.5 to 3.0 in	5.6 to 7.3

152E--Milaca fine sandy loam, 12 to 25 percent slopes

Milaca

Extent: 95 percent of the unit

Landform(s): drumlins

Slope gradient: 12 to 25 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .15

Land capability class, nonirrigated: 6e

Hydric soil: no

Hydrologic group: C

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>
A -- 0 to 3 in	fine sandy loam	moderately rapid	0.4 to 0.6 in	5.1 to 6.5
E -- 3 to 12 in	fine sandy loam	moderately rapid	1.0 to 1.6 in	5.1 to 6.5
Bt,BC -- 12 to 40 in	fine sandy loam	moderately rapid	2.8 to 5.4 in	5.1 to 6.5
Cd -- 40 to 80 in	fine sandy loam	very slow	1.6 to 3.2 in	5.6 to 7.3

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152E--Milaca fine sandy loam, 12 to 25 percent slopes

161--Isanti fine sandy loam, depressional, 0 to 1 percent slopes

Isanti, depressional

Extent: 95 percent of the unit

Landform(s): depressions on outwash plains

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): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

outwash *Kw (surface layer):* .10

Land capability class, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: B/D

Potential frost action: moderate

Representative soil profile:

Texture

Ap --	0 to 11 in	fine sandy loam
Bg --	11 to 28 in	fine sand
Cg --	28 to 80 in	fine sand

Permeability

moderately rapid
rapid
rapid

Available water

capacity

1.8 to 2.0 in
1.2 to 1.9 in
2.6 to 3.6 in

pH

5.1 to 6.5
5.1 to 6.5
5.6 to 7.3

162--Lino loamy fine sand, 0 to 2 percent slopes

Lino

Extent: 95 percent of the unit

Landform(s): outwash plains

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): 2

Wind erodibility index (WEI): 134

outwash *Kw (surface layer):* .10

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: A

Potential frost action: moderate

Representative soil profile:

Texture

Ap --	0 to 6 in	loamy fine sand
Bw --	6 to 34 in	fine sand
C --	34 to 60 in	fine sand

Permeability

rapid
rapid
rapid

Available water

capacity

0.5 to 0.6 in
1.7 to 2.8 in
1.3 to 1.8 in

pH

5.1 to 6.0
5.1 to 6.0
5.1 to 6.5

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162--Lino loamy fine sand, 0 to 2 percent slopes

163A--Brainerd sandy loam, 0 to 3 percent slopes

Brainerd

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 0 to 3 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 2s

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

Representative soil profile:

Texture

Ap --	0 to 8 in	sandy loam
E,EB --	8 to 20 in	sandy loam
Bt --	20 to 28 in	sandy loam
BC --	28 to 46 in	sandy loam
Cd --	46 to 60 in	sandy loam

Permeability

Available water

capacity

pH

moderately rapid	1.0 to 1.4 in	4.5 to 6.0
moderately rapid	1.5 to 2.0 in	4.5 to 6.0
moderate	0.9 to 1.3 in	5.1 to 6.5
slow	1.4 to 2.2 in	5.1 to 7.3
very slow	0.6 to 1.1 in	5.6 to 7.3

163B--Brainerd sandy loam, 3 to 5 percent slopes

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163B--Brainerd sandy loam, 3 to 5 percent slopes

Brainerd

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 5 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

Representative soil profile:

Texture

Ap --	0 to 8 in	sandy loam
E,EB --	8 to 13 in	sandy loam
Bt --	13 to 25 in	sandy loam
BC --	25 to 40 in	sandy loam
Cd --	40 to 60 in	sandy loam

Available water

<i>Permeability</i>	<i>capacity</i>	<i>pH</i>
moderately rapid	1.0 to 1.4 in	4.5 to 6.0
moderately rapid	0.6 to 0.8 in	4.5 to 6.0
moderate	1.5 to 2.0 in	5.1 to 6.5
slow	1.2 to 1.8 in	5.1 to 7.3
very slow	0.8 to 1.6 in	5.6 to 7.3

164A--Mora loam, 0 to 3 percent slopes

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164A--Mora loam, 0 to 3 percent slopes

Mora

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 0 to 3 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 2s

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 4 in	loam
E --	4 to 12 in	fine sandy loam
Bt --	12 to 24 in	fine sandy loam
BC --	24 to 48 in	fine sandy loam
Cd --	48 to 80 in	fine sandy loam

Permeability

moderate
moderately rapid
moderately rapid
slow
very slow

Available water

capacity

0.7 to 0.8 in
0.9 to 1.5 in
1.2 to 2.3 in
1.9 to 2.9 in
1.3 to 2.6 in

pH

5.1 to 6.5
5.1 to 6.5
5.1 to 6.5
5.6 to 7.3
5.6 to 7.3

164B--Mora fine sandy loam, 3 to 5 percent slopes

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Map Unit Description (MN)

Benton 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]

164B--Mora fine sandy loam, 3 to 5 percent slopes

Mora

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 5 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .15

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 4 in	fine sandy loam
E --	4 to 11 in	fine sandy loam
Bt --	11 to 23 in	fine sandy loam
BC --	23 to 40 in	fine sandy loam
Cd --	40 to 80 in	fine sandy loam

Available water

<i>Permeability</i>	<i>capacity</i>	<i>pH</i>
moderately rapid	0.6 to 0.7 in	5.1 to 6.5
moderately rapid	0.8 to 1.3 in	5.1 to 6.5
moderately rapid	1.2 to 2.2 in	5.1 to 6.5
slow	1.4 to 2.1 in	5.6 to 7.3
very slow	1.6 to 3.2 in	5.6 to 7.3

165--Parent loam, 0 to 2 percent slopes

Parent

Extent: 90 percent of the unit

Landform(s): flats on interdrumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .32

Land capability class, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: C/D

Potential frost action: high

Representative soil profile:

Texture

Ap --	0 to 11 in	loam
Bg --	11 to 28 in	fine sandy loam
BC --	28 to 40 in	fine sandy loam
Cd --	40 to 60 in	fine sandy loam

Available water

<i>Permeability</i>	<i>capacity</i>	<i>pH</i>
moderate	2.2 to 2.4 in	5.6 to 7.3
moderate	2.0 to 2.9 in	5.6 to 7.3
moderately slow	1.0 to 1.5 in	6.1 to 7.3
very slow	0.8 to 1.6 in	6.1 to 8.4

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

165--Parent loam, 0 to 2 percent slopes

166--Ronneby loam, 0 to 2 percent slopes

Ronneby

Extent: 90 percent of the unit

Landform(s): interdrumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .32

Land capability class, nonirrigated: 2w

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 4 in	loam
E --	4 to 12 in	fine sandy loam
Bt1,2 --	12 to 33 in	fine sandy loam
Bt3 --	33 to 45 in	fine sandy loam
Cd --	45 to 60 in	fine sandy loam

<i>Permeability</i>	<i>Available water</i>	
	<i>capacity</i>	<i>pH</i>
moderate	0.7 to 0.9 in	5.1 to 6.5
moderately rapid	0.9 to 1.5 in	5.1 to 6.5
moderate	2.6 to 4.0 in	5.6 to 6.5
moderately slow	0.9 to 1.4 in	5.6 to 7.3
very slow	0.6 to 1.2 in	5.6 to 7.3

179A--Langola loamy fine sand, 0 to 2 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

179A--Langola loamy fine sand, 0 to 2 percent slopes

Langola

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

outwash over till Kw (surface layer): .17

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: C

Potential frost action: low

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A --	0 to 15 in	loamy fine sand	rapid	1.5 to 1.8 in	5.1 to 6.5
Bw --	15 to 31 in	loamy sand	rapid	1.3 to 1.6 in	5.1 to 6.5
2Bt --	31 to 39 in	sandy loam	moderate	0.8 to 1.2 in	5.1 to 6.5
2BC --	39 to 43 in	sandy loam	slow	0.3 to 0.5 in	5.6 to 7.3
2Cd --	43 to 60 in	sandy loam	very slow	0.7 to 1.4 in	5.6 to 7.3

179B--Langola loamy fine sand, 2 to 6 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

179B--Langola loamy fine sand, 2 to 6 percent slopes

Langola

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 2 to 6 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

outwash over till Kw (surface layer): .17

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: C

Potential frost action: low

<i>Representative soil profile:</i>			<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>		<i>pH</i>
Ap,A --	0 to 13 in	loamy fine sand		rapid	1.3 to 1.6 in	5.1 to 6.5	
Bw --	13 to 26 in	loamy sand		rapid	1.0 to 1.3 in	5.1 to 6.5	
2Bt --	26 to 32 in	sandy loam		moderate	0.6 to 0.9 in	5.1 to 6.5	
2BC --	32 to 42 in	sandy loam		slow	0.8 to 1.2 in	5.6 to 7.3	
2Cd --	42 to 60 in	sandy loam		very slow	0.7 to 1.4 in	5.6 to 7.3	

217--Nokasippi loamy fine sand, depressional, 0 to 1 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

217--Nokasippi loamy fine sand, depressional, 0 to 1 percent slopes

Nokasippi, depressional

Extent: 90 percent of the unit

Landform(s): depressions on interdrumlins

Slope gradient: 0 to 1 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

outwash over till Kw (surface layer): .17

Land capability class, nonirrigated: 4w

Hydric soil: yes

Hydrologic group: C/D

Potential frost action: high

Representative soil profile:

Texture

Ap,A --	0 to 14 in	loamy fine sand
Bg --	14 to 25 in	fine sand
2Bg --	25 to 38 in	loam
2BC --	38 to 48 in	sandy loam
2Cd --	48 to 60 in	sandy loam

Available water

<i>Permeability</i>	<i>capacity</i>	<i>pH</i>
rapid	1.4 to 1.7 in	4.5 to 6.5
rapid	0.7 to 1.3 in	4.5 to 7.3
moderately rapid	1.4 to 2.3 in	4.5 to 7.3
slow	0.8 to 1.2 in	4.5 to 7.3
very slow	0.5 to 0.9 in	5.1 to 7.3

218--Watab loamy fine sand, 0 to 2 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

218--Watab loamy fine sand, 0 to 2 percent slopes

Watab

Extent: 90 percent of the unit

Landform(s): flats on interdrumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

outwash over till *Kw (surface layer):* .17

Land capability class, nonirrigated: 3w

Hydric soil: yes

Hydrologic group: C/D

Potential frost action: moderate

Representative soil profile:

Texture

Ap --	0 to 8 in	loamy fine sand
E,Bw --	8 to 23 in	loamy fine sand
2Bt --	23 to 33 in	fine sandy loam
2BC --	33 to 45 in	sandy loam
2Cd --	45 to 60 in	sandy loam

Permeability

rapid
rapid
moderately rapid
slow
very slow

Available water

capacity

0.8 to 0.9 in
0.9 to 1.3 in
0.8 to 1.2 in
0.9 to 1.4 in
0.6 to 1.2 in

pH

5.1 to 6.0
5.1 to 6.5
5.1 to 6.5
5.6 to 7.3
5.6 to 7.3

260--Duelm loamy sand, 0 to 2 percent slopes

Duelm

Extent: 95 percent of the unit

Landform(s): stream terraces, outwash plains

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): 2

Wind erodibility index (WEI): 134

outwash *Kw (surface layer):* .17

Land capability class, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential frost action: moderate

Representative soil profile:

Texture

Ap --	0 to 10 in	loamy sand
Bw,Bg --	10 to 52 in	sand
C --	52 to 60 in	sand

Permeability

rapid
rapid
rapid

Available water

capacity

0.8 to 1.2 in
2.5 to 4.6 in
0.2 to 0.6 in

pH

5.6 to 7.3
5.1 to 7.3
5.6 to 7.8

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

260--Duelm loamy sand, 0 to 2 percent slopes

266--Freer silt loam, 0 to 2 percent slopes

Freer

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .37

Land capability class, nonirrigated: 2w

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

Ap --	0 to 7 in	silt loam
E --	7 to 12 in	silt loam
B/E --	12 to 20 in	silt loam
2Bt --	20 to 40 in	sandy loam
2Cd --	40 to 60 in	sandy loam

Permeability

moderate
moderate
moderate
moderately slow
very slow

Available water

capacity

1.4 to 1.7 in
0.9 to 1.0 in
1.2 to 1.7 in
2.2 to 2.6 in
0.8 to 1.6 in

pH

4.5 to 6.0
4.5 to 6.0
5.1 to 6.0
5.6 to 7.3
5.6 to 7.3

325--Prebish fine sandy loam, depressional, 0 to 1 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

325--Prebish fine sandy loam, depressional, 0 to 1 percent slopes

Prebish, depressional

Extent: 90 percent of the unit

Landform(s): depressions on interdrumlins

Slope gradient: 0 to 1 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .20

Land capability class, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: C/D

Potential frost action: high

Representative soil profile:

Texture

Ap,A --	0 to 16 in	fine sandy loam
Bg --	16 to 46 in	fine sandy loam
Cd --	46 to 60 in	sandy loam

Permeability

moderately rapid
moderate
very slow

Available water

capacity

2.6 to 2.9 in
4.2 to 4.8 in
0.6 to 1.1 in

pH

5.6 to 7.3
5.6 to 7.3
5.6 to 8.4

328A--Sartell fine sand, 0 to 2 percent slopes

Sartell

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

outwash *Kw (surface layer):* .15

Land capability class, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

A --	0 to 7 in	fine sand
Bw --	7 to 36 in	fine sand
C --	36 to 60 in	fine sand

Permeability

rapid
rapid
rapid

Available water

capacity

0.6 to 0.8 in
1.7 to 2.9 in
1.2 to 2.2 in

pH

5.1 to 6.0
5.1 to 6.0
5.6 to 7.3

328B--Sartell fine sand, 2 to 6 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

328B--Sartell fine sand, 2 to 6 percent slopes

Sartell

Extent: 95 percent of the unit

Landform(s): outwash plains

Slope gradient: 2 to 6 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

outwash *Kw (surface layer):* .15

Land capability class, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

A --	0 to 4 in	fine sand
Bw --	4 to 33 in	fine sand
C --	33 to 80 in	fine sand

Permeability

Available water

capacity

pH

rapid	0.4 to 0.4 in	5.1 to 6.0
rapid	1.7 to 2.9 in	5.1 to 6.0
rapid	2.3 to 4.2 in	5.6 to 7.3

328C--Sartell fine sand, 6 to 12 percent slopes

Sartell

Extent: 95 percent of the unit

Landform(s): outwash plains

Slope gradient: 6 to 12 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

outwash *Kw (surface layer):* .15

Land capability class, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

A --	0 to 5 in	fine sand
Bw --	5 to 25 in	fine sand
C --	25 to 60 in	fine sand

Permeability

Available water

capacity

pH

rapid	0.5 to 0.6 in	5.1 to 6.0
rapid	1.2 to 2.0 in	5.1 to 6.0
rapid	1.7 to 3.1 in	5.6 to 7.3

328E--Sartell fine sand, 12 to 25 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

328E--Sartell fine sand, 12 to 25 percent slopes

Sartell

Extent: 95 percent of the unit

Landform(s): outwash plains

Slope gradient: 12 to 25 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

outwash *Kw (surface layer):* .15

Land capability class, nonirrigated: 7s

Hydric soil: no

Hydrologic group: A

Potential 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	fine sand	rapid	0.3 to 0.3 in	5.1 to 6.0
Bw -- 3 to 26 in	fine sand	rapid	1.4 to 2.3 in	5.1 to 6.0
C -- 26 to 60 in	fine sand	rapid	1.7 to 3.0 in	5.6 to 7.3

337--Warman loam, depressional, 0 to 1 percent slopes

Warman, depressional

Extent: 95 percent of the unit

Landform(s): depressions on outwash plains

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): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

outwash *Kw (surface layer):* .24

Land capability class, nonirrigated: 6w

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>
A,AB -- 0 to 16 in	loam	moderately rapid	3.1 to 4.0 in	4.5 to 6.0
Bg -- 16 to 34 in	fine sandy loam	moderate	2.7 to 3.5 in	5.1 to 7.3
2Cg -- 34 to 60 in	gravelly coarse sand	rapid	0.3 to 2.1 in	6.1 to 7.3

445B--Braham loamy fine sand, lacustrine substratum, 2 to 6 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

445B--Braham loamy fine sand, lacustrine substratum, 2 to 6 percent slopes

Braham, lacustrine substratum

Extent: 90 percent of the unit

Landform(s): moraines

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): 2

Wind erodibility index (WEI): 134

outwash over till Kw (surface layer): .17

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: B

Potential frost action: low

Representative soil profile:

Texture

Ap --	0 to 9 in	loamy fine sand
E --	9 to 28 in	fine sand
2Bt --	28 to 44 in	silty clay loam
2C --	44 to 60 in	silt loam

Permeability

rapid
rapid
moderate
moderate

Available water

capacity

0.9 to 1.1 in
1.1 to 1.7 in
2.6 to 3.6 in
2.5 to 3.5 in

pH

5.6 to 7.3
5.6 to 7.3
5.1 to 7.3
7.4 to 8.4

464A--Brennyville silt loam, 1 to 3 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

464A--Brennyville silt loam, 1 to 3 percent slopes

Brennyville

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 1 to 3 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .37

Land capability class, nonirrigated: 2s

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 4 in	silt loam
E --	4 to 14 in	silt loam
B/E --	14 to 21 in	silt loam
2Bt --	21 to 30 in	fine sandy loam
2BC --	30 to 39 in	sandy loam
2Cd --	39 to 60 in	sandy loam

Permeability

moderate
moderate
moderate
moderate
slow
very slow

Available water

capacity

0.9 to 0.9 in
1.7 to 2.3 in
1.3 to 1.6 in
1.1 to 1.4 in
0.7 to 1.1 in
0.8 to 1.7 in

pH

4.5 to 6.0
4.5 to 6.5
5.1 to 6.5
5.1 to 7.3
5.1 to 7.3
5.1 to 7.8

464B--Brennyville silt loam, 3 to 6 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

464B--Brennyville silt loam, 3 to 6 percent slopes

Brennyville

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 6 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .37

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 8 in	silt loam
E --	8 to 16 in	silt loam
2Bt --	16 to 28 in	fine sandy loam
2BC --	28 to 36 in	sandy loam
2Cd --	36 to 60 in	sandy loam

Permeability

moderate
moderate
moderate
slow
very slow

Available water

capacity

1.7 to 1.9 in
1.4 to 1.8 in
1.4 to 1.9 in
0.6 to 0.9 in
1.0 to 1.9 in

pH

4.5 to 6.0
4.5 to 6.5
5.1 to 7.3
5.1 to 7.3
5.1 to 7.8

466--Ogilvie silt loam, 0 to 2 percent slopes

Ogilvie

Extent: 95 percent of the unit

Landform(s): outwash plains

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

outwash *Kw (surface layer):* .28

Land capability class, nonirrigated: 2w

Hydric soil: no

Hydrologic group: B

Potential frost action: high

Representative soil profile:

Texture

Ap --	0 to 8 in	silt loam
E --	8 to 18 in	silt loam
Bt --	18 to 31 in	loam
2C --	31 to 60 in	gravelly sand

Permeability

moderate
moderate
moderate
rapid

Available water

capacity

1.6 to 1.9 in
2.0 to 2.3 in
2.2 to 2.9 in
0.6 to 1.1 in

pH

5.1 to 6.0
5.1 to 6.0
5.1 to 6.0
5.1 to 6.5

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

466--Ogilvie silt loam, 0 to 2 percent slopes

540--Seelyeville muck, 0 to 1 percent slopes

Seelyeville

Extent: 85 percent of the unit

Landform(s): depressions on interdrumlins, depressions on outwash plains

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): 3

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

organic material *Kw (surface layer):* .02

Land capability class, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential frost action: high

Representative soil profile:

Texture

Oa1 -- 0 to 13 in muck
Oa2 -- 13 to 60 in muck

Permeability

moderately rapid
moderately rapid

Available water

capacity

4.5 to 5.8 in
16.4 to 21.1 in

pH

543--Markey muck, 0 to 1 percent slopes

Markey

Extent: 90 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material:

layer): .02

Restrictive feature(s):

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

organic material over outwash *Kw (surface*

Land capability class, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential frost action: high

Representative soil profile:

Texture

Oa -- 0 to 21 in muck
2Cg -- 21 to 60 in sand

Permeability

moderately rapid
rapid

Available water

capacity

7.3 to 9.4 in
1.2 to 3.1 in

pH

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

543--Markey muck, 0 to 1 percent slopes

544--Cathro muck, 0 to 1 percent slopes

Cathro

Extent: 85 percent of the unit

Landform(s): depressions on interdrumlins

Slope gradient: 0 to 1 percent

Parent material:

layer): .02

Restrictive feature(s):

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

organic material over till *Kw (surface*

Land capability class, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential frost action: high

Representative soil profile:

Texture

Oa --	0 to 26 in	muck
2Cg --	26 to 60 in	sandy loam

Permeability

moderately rapid
moderate

Available water

capacity

11.7 to 14.3 in
3.7 to 7.4 in

pH

567A--Verndale sandy loam, 0 to 2 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

567A--Verndale sandy loam, 0 to 2 percent slopes

Verndale

Extent: 95 percent of the unit

Landform(s): outwash plains

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

outwash *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 capacity</i>	<i>pH</i>
Ap -- 0 to 11 in	sandy loam	moderately rapid	1.4 to 1.9 in	5.6 to 7.3
Bt -- 11 to 22 in	sandy loam	moderate	1.5 to 2.0 in	5.6 to 7.3
2Bw -- 22 to 36 in	coarse sand	rapid	0.8 to 1.1 in	5.6 to 7.3
2C -- 36 to 60 in	sand	rapid	0.5 to 1.4 in	6.1 to 8.4

623A--Pierz sandy loam, 0 to 2 percent slopes

Pierz

Extent: 95 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

outwash *Kw (surface layer):* .20

Land capability class, nonirrigated: 2s

Hydric soil: no

Hydrologic group: B

Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.3 to 1.7 in	5.1 to 6.5
Bt -- 10 to 23 in	sandy loam	moderately rapid	2.1 to 2.6 in	5.1 to 6.5
2Bt -- 23 to 27 in	gravelly sandy loam	moderately rapid	0.7 to 0.9 in	5.1 to 6.5
2C -- 27 to 60 in	gravelly coarse sand	very rapid	0.7 to 1.3 in	5.1 to 6.5

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

623A--Pierz sandy loam, 0 to 2 percent slopes

676A--Kost loamy fine sand, 0 to 2 percent slopes

Kost

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

outwash *Kw (surface layer):* .17

Land capability class, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

Ap,A --	0 to 16 in	loamy fine sand
Bw --	16 to 34 in	fine sand
C --	34 to 60 in	fine sand

Permeability

Available water

capacity

pH

rapid	1.5 to 1.9 in	5.1 to 7.3
rapid	1.1 to 1.4 in	5.1 to 7.3
rapid	1.3 to 1.8 in	5.6 to 7.3

676B--Kost loamy fine sand, 2 to 6 percent slopes

Kost

Extent: 95 percent of the unit

Landform(s): outwash plains

Slope gradient: 2 to 6 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

outwash *Kw (surface layer):* .17

Land capability class, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

Ap,A --	0 to 14 in	loamy fine sand
Bw --	14 to 33 in	fine sand
C --	33 to 60 in	fine sand

Permeability

Available water

capacity

pH

rapid	1.3 to 1.7 in	5.1 to 7.3
rapid	1.1 to 1.5 in	5.1 to 7.3
rapid	1.3 to 1.9 in	5.6 to 7.3

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton County, Minnesota

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676B--Kost loamy fine sand, 2 to 6 percent slopes

682B--Milaca fine sandy loam, 3 to 6 percent slopes, very stony

Milaca, very stony

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 6 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 6s

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

Representative soil profile:

Texture

A --	0 to 6 in	fine sandy loam
E, BE --	6 to 19 in	fine sandy loam
Bt --	19 to 28 in	fine sandy loam
BC --	28 to 45 in	fine sandy loam
Cd --	45 to 60 in	sandy loam

Permeability

Available water

capacity

pH

moderately rapid	0.8 to 1.1 in	5.1 to 6.5
moderately rapid	2.3 to 2.9 in	5.1 to 6.5
moderate	1.1 to 1.4 in	5.1 to 6.5
slow	1.4 to 2.0 in	5.6 to 7.3
very slow	0.6 to 1.2 in	5.6 to 7.3

717A--Novak silt loam, 0 to 2 percent slopes

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Map Unit Description (MN)

Benton 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]

717A--Novak silt loam, 0 to 2 percent slopes

Novak

Extent: 95 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
outwash Kw (surface layer): .37
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 capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	silt loam	moderate	1.7 to 1.9 in	5.1 to 6.5
B/E -- 8 to 19 in	silt loam	moderate	2.2 to 2.4 in	5.1 to 6.5
Bt -- 19 to 28 in	silt loam	moderate	1.4 to 2.0 in	5.1 to 6.5
2Bt -- 28 to 32 in	sandy loam	moderately rapid	0.4 to 0.7 in	5.1 to 6.5
2C -- 32 to 60 in	gravelly coarse sand	rapid	0.6 to 1.1 in	5.1 to 6.5

717B--Novak silt loam, 2 to 6 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

717B--Novak silt loam, 2 to 6 percent slopes

Novak

Extent: 95 percent of the unit
Landform(s): outwash plains
Slope gradient: 2 to 6 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
 outwash *Kw (surface layer):* .37
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>
Ap -- 0 to 7 in	silt loam	moderate	1.6 to 1.7 in	5.1 to 6.5
B/E -- 7 to 17 in	silt loam	moderate	2.0 to 2.2 in	5.1 to 6.5
Bt -- 17 to 23 in	silt loam	moderate	0.9 to 1.3 in	5.1 to 6.5
2Bt -- 23 to 26 in	sandy loam	moderately rapid	0.3 to 0.6 in	5.1 to 6.5
2C -- 26 to 60 in	gravelly coarse sand	rapid	0.7 to 1.4 in	5.1 to 6.5

722--Blomford loamy sand, lacustrine substratum, 0 to 2 percent slopes

Blomford, lacustrine substratum

Extent: 90 percent of the unit
Landform(s): flats on moraines
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): 2
Wind erodibility index (WEI): 134
 outwash over lacustrine *Kw (surface layer):* .17
Land capability class, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
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>
Ap -- 0 to 9 in	loamy sand	rapid	0.7 to 1.1 in	5.1 to 7.3
Eg -- 9 to 30 in	loamy sand	rapid	1.3 to 1.9 in	5.1 to 7.3
2Btg -- 30 to 40 in	silty clay loam	moderate	1.6 to 2.3 in	5.1 to 7.3
2Cg -- 40 to 60 in	silt loam	moderate	3.1 to 4.3 in	6.1 to 8.4

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

722--Blomford loamy sand, lacustrine substratum, 0 to 2 percent slopes

723--Freer silt loam, 0 to 2 percent slopes, very stony

Freer, very stony

Extent: 90 percent of the unit

Landform(s): interdrumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .37

Land capability class, nonirrigated: 6s

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

Permeability

Available water capacity

pH

Ap --	0 to 7 in	silt loam	moderate	1.4 to 1.7 in	4.5 to 6.0
E --	7 to 12 in	silt loam	moderate	0.9 to 1.0 in	4.5 to 6.0
B/E --	12 to 20 in	silt loam	moderate	1.2 to 1.7 in	5.1 to 6.0
2Bt --	20 to 40 in	sandy loam	moderately slow	2.2 to 2.6 in	5.6 to 7.3
2Cd --	40 to 60 in	fine sandy loam	very slow	0.8 to 1.6 in	5.6 to 7.3

725--Kratka fine sandy loam, stratified substratum, 0 to 3 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

725--Kratka fine sandy loam, stratified substratum, 0 to 3 percent slopes

Kratka, stratified substratum

Extent: 90 percent of the unit

Landform(s): moraines

Slope gradient: 0 to 3 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

lacustrine sediments *Kw (surface layer):* .20

Land capability class, nonirrigated: 2w

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>
A -- 0 to 9 in	fine sandy loam	moderately rapid	1.4 to 1.6 in	6.1 to 7.3
Bg -- 9 to 27 in	loamy fine sand	rapid	1.1 to 1.9 in	6.1 to 7.3
2Cg -- 27 to 80 in	fine sandy loam	moderately rapid	6.9 to 9.0 in	6.1 to 7.3

727B--Milaca very fine sandy loam, 3 to 6 percent slopes

Milaca

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 6 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .37

Land capability class, nonirrigated: 2e

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 6 in	very fine sandy loam	moderately rapid	0.8 to 1.1 in	5.1 to 6.5
E, BE -- 6 to 17 in	very fine sandy loam	moderately rapid	2.0 to 2.4 in	5.1 to 6.5
Bt -- 17 to 25 in	fine sandy loam	moderate	1.0 to 1.3 in	5.1 to 6.5
BC -- 25 to 43 in	fine sandy loam	slow	1.4 to 2.1 in	5.6 to 7.3
Cd -- 43 to 60 in	fine sandy loam	very slow	0.7 to 1.4 in	5.6 to 7.3

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

727B--Milaca very fine sandy loam, 3 to 6 percent slopes

728B--Brennyville silt loam, 1 to 6 percent slopes, very stony

Brennyville, very stony

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 1 to 6 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .37

Land capability class, nonirrigated: 6s

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 8 in	silt loam
E ₁ /E	8 to 16 in	silt loam
2Bt	16 to 28 in	fine sandy loam
2BC	28 to 36 in	fine sandy loam
2Cd	36 to 60 in	sandy loam

Permeability

Available water

capacity

pH

moderate	1.7 to 1.9 in	4.5 to 6.0
moderate	1.4 to 1.8 in	4.5 to 6.5
moderate	1.4 to 1.9 in	5.1 to 7.3
slow	0.6 to 0.9 in	5.1 to 7.3
very slow	1.0 to 1.9 in	5.1 to 7.8

729--Warman loam, 0 to 2 percent slopes

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Map Unit Description (MN)

Benton 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]

729--Warman loam, 0 to 2 percent slopes

Warman

Extent: 95 percent of the unit
Landform(s): flats on outwash plains
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): 5
Wind erodibility index (WEI): 56
 outwash *Kw (surface layer):* .24
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>
A -- 0 to 13 in	loam	moderately rapid	2.5 to 3.2 in	4.5 to 6.0
Bg -- 13 to 31 in	fine sandy loam	moderate	2.7 to 3.6 in	5.1 to 7.3
2Cg -- 31 to 60 in	gravelly coarse sand	rapid	0.3 to 2.3 in	6.1 to 7.3

730A--Sanburn fine sandy loam, 0 to 2 percent slopes

Sanburn

Extent: 85 percent of the unit
Landform(s): outwash plains
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
 outwash *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 capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	fine sandy loam	moderately rapid	0.7 to 0.9 in	5.1 to 6.5
E -- 6 to 12 in	fine sandy loam	moderately rapid	0.4 to 0.5 in	5.1 to 6.5
Bt -- 12 to 16 in	fine sandy loam	moderately rapid	0.3 to 0.5 in	5.1 to 6.5
2Bt -- 16 to 21 in	gravelly sandy loam	moderately rapid	0.3 to 0.6 in	5.1 to 6.5
2C -- 21 to 60 in	gravelly coarse sand	rapid	0.8 to 1.6 in	5.1 to 6.5

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

730A--Sanburn fine sandy loam, 0 to 2 percent slopes

730B--Sanburn fine sandy loam, 2 to 6 percent slopes

Sanburn

Extent: 85 percent of the unit

Landform(s): outwash plains

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

outwash *Kw (surface layer):* .20

Land capability class, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential frost action: low

Representative soil profile:

Texture

Ap --	0 to 6 in	fine sandy loam
E --	6 to 11 in	fine sandy loam
Bt --	11 to 16 in	fine sandy loam
2Bt --	16 to 20 in	gravelly sandy loam
2C --	20 to 60 in	gravelly coarse sand

Permeability

Available water

capacity

pH

moderately rapid	0.7 to 0.9 in	5.1 to 6.5
moderately rapid	0.4 to 0.5 in	5.1 to 6.5
moderately rapid	0.4 to 0.6 in	5.1 to 6.5
moderately rapid	0.3 to 0.5 in	5.1 to 6.5
rapid	0.8 to 1.6 in	5.1 to 6.5

730C--Sanburn fine sandy loam, 6 to 12 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

730C--Sanburn fine sandy loam, 6 to 12 percent slopes

Sanburn

Extent: 85 percent of the unit

Landform(s): outwash plains

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

outwash *Kw (surface layer):* .20

Land capability class, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	fine sandy loam	moderately rapid	0.7 to 0.9 in	5.1 to 6.5
E -- 6 to 12 in	fine sandy loam	moderately rapid	0.4 to 0.5 in	5.1 to 6.5
Bt -- 12 to 16 in	fine sandy loam	moderately rapid	0.3 to 0.5 in	5.1 to 6.5
2C -- 16 to 60 in	gravelly sand	rapid	0.9 to 1.7 in	5.1 to 6.5

732A--Bushville fine sand, 0 to 2 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

732A--Bushville fine sand, 0 to 2 percent slopes

Bushville

Extent: 85 percent of the unit

Landform(s): drumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

outwash over till Kw (surface layer): .15

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: C

Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	fine sand	rapid	0.7 to 1.0 in	5.1 to 6.5
E -- 10 to 24 in	loamy fine sand	rapid	0.9 to 1.3 in	5.1 to 6.5
2Bt1 -- 24 to 30 in	fine sandy loam	moderate	0.6 to 0.9 in	5.1 to 6.5
2Bt2 -- 30 to 42 in	sandy loam	moderately slow	1.0 to 1.5 in	5.1 to 7.3
2Cd -- 42 to 60 in	sandy loam	very slow	0.7 to 1.4 in	5.6 to 7.3

732B--Bushville fine sand, 2 to 6 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

732B--Bushville fine sand, 2 to 6 percent slopes

Bushville

Extent: 85 percent of the unit

Landform(s): drumlins

Slope gradient: 2 to 6 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

outwash over till Kw (surface layer): .15

Land capability class, nonirrigated: 3s

Hydric soil: no

Hydrologic group: C

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>
Ap -- 0 to 6 in	fine sand	rapid	0.4 to 0.6 in	5.1 to 6.5
E -- 6 to 24 in	loamy fine sand	rapid	1.1 to 1.6 in	5.1 to 6.5
2Bt1 -- 24 to 30 in	fine sandy loam	moderate	0.6 to 0.9 in	5.1 to 6.5
2Bt2 -- 30 to 40 in	sandy loam	moderately slow	0.8 to 1.2 in	5.1 to 7.3
2Cd -- 40 to 60 in	sandy loam	very slow	0.8 to 1.6 in	5.6 to 7.3

754--Prebish fine sandy loam, depressional, 0 to 1 percent slopes, very stony

Prebish, depressional, very stony

Extent: 90 percent of the unit

Landform(s): depressions on interdrumlins

Slope gradient: 0 to 1 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till Kw (surface layer): .20

Land capability class, nonirrigated: 6s

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>
Ap,A -- 0 to 16 in	fine sandy loam	moderately rapid	2.6 to 2.9 in	5.6 to 7.3
Bg -- 16 to 46 in	fine sandy loam	moderate	4.2 to 4.8 in	5.6 to 7.3
Cd -- 46 to 60 in	sandy loam	very slow	0.6 to 1.1 in	5.6 to 8.4

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

754--Prebish fine sandy loam, depressional, 0 to 1 percent slopes, very stony

756A--Dalbo very fine sandy loam, silty substratum, 0 to 2 percent slopes

Dalbo, silty substratum

Extent: 95 percent of the unit

Landform(s): lake plains

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): 3

Wind erodibility index (WEI): 86

lacustrine sediments *Kw (surface layer):* .28

Land capability class, nonirrigated: 1

Hydric soil: no

Hydrologic group: B

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 7 in	very fine sandy loam
E ₁ /E	7 to 14 in	very fine sandy loam
Bt --	14 to 34 in	silty clay loam
C --	34 to 60 in	silt loam

Permeability

moderately rapid
moderately rapid
moderately slow
moderate

Available water capacity

0.9 to 1.3 in
0.9 to 1.3 in
2.0 to 3.5 in
5.2 to 5.7 in

pH

5.6 to 7.3
5.6 to 7.3
5.1 to 7.3
7.4 to 8.4

756B--Dalbo very fine sandy loam, silty substratum, 2 to 6 percent slopes

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

756B--Dalbo very fine sandy loam, silty substratum, 2 to 6 percent slopes

Dalbo, silty substratum

Extent: 95 percent of the unit

Landform(s): lake plains

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): 3

Wind erodibility index (WEI): 86

lacustrine sediments *Kw (surface layer):* .28

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>
Ap -- 0 to 7 in	very fine sandy loam	moderately rapid	0.9 to 1.3 in	5.6 to 7.3
E,B/E -- 7 to 14 in	very fine sandy loam	moderately rapid	0.9 to 1.3 in	5.6 to 7.3
Bt -- 14 to 25 in	silty clay loam	moderately slow	1.1 to 2.0 in	5.1 to 7.3
C -- 25 to 60 in	silt loam	moderate	6.9 to 7.6 in	7.4 to 8.4

766--Kratka loamy fine sand, depressional, stratified substratum, 0 to 1 percent slopes

Kratka, depressional, stratified substratum

Extent: 90 percent of the unit

Landform(s): depressions on moraines

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

lacustrine sediments *Kw (surface layer):* .17

Land capability class, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: B/D

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>
A -- 0 to 13 in	loamy fine sand	rapid	1.3 to 1.6 in	6.6 to 7.8
Bg -- 13 to 42 in	loamy fine sand	rapid	1.7 to 3.2 in	6.6 to 7.8
2Cg -- 42 to 60 in	stratified loamy very fine sand to silt loam	moderately rapid	2.1 to 3.9 in	6.1 to 8.4

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

766--Kratka loamy fine sand, depressional, stratified substratum, 0 to 1 percent slopes

776B--Sanburn-Milaca complex, 3 to 8 percent slopes

Sanburn

Extent: 60 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 8 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

outwash *Kw (surface layer):* .20

Land capability class, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	fine sandy loam	moderately rapid	0.7 to 0.9 in	5.1 to 6.5
E -- 6 to 11 in	fine sandy loam	moderately rapid	0.4 to 0.5 in	5.1 to 6.5
Bt -- 11 to 16 in	fine sandy loam	moderately rapid	0.4 to 0.6 in	5.1 to 6.5
2Bt -- 16 to 20 in	gravelly sandy loam	moderately rapid	0.3 to 0.5 in	5.1 to 6.5
2C -- 20 to 60 in	gravelly sand	rapid	0.8 to 1.6 in	5.1 to 6.5

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

776B--Sanburn-Milaca complex, 3 to 8 percent slopes

Milaca

Extent: 25 percent of the unit

Landform(s): drumlins

Slope gradient: 3 to 8 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 3e

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	fine sandy loam	moderately rapid	0.8 to 1.1 in	5.1 to 6.5
E, BE -- 6 to 19 in	fine sandy loam	moderately rapid	2.3 to 2.9 in	5.1 to 6.5
Bt -- 19 to 28 in	fine sandy loam	moderate	1.1 to 1.4 in	5.1 to 6.5
BC -- 28 to 40 in	sandy loam	slow	1.0 to 1.5 in	5.6 to 7.3
Cd -- 40 to 60 in	sandy loam	very slow	0.8 to 1.6 in	5.6 to 7.3

1013--Pits, quarry

Pits, quarry

Extent: 100 percent of the unit

Landform(s): outwash plains, stream terraces

Slope gradient: 0 to 50 percent

Parent material:

Restrictive feature(s): lithic bedrock at 0 to 4 inches

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: 8s

Hydric soil: no

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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1015--Udipsamments, cut and fill land

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

1015--Udipsamments, cut and fill land

Udipsamments

Extent: 95 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 6 percent

Parent material:

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 180

outwash *Kw (surface layer):* .15

Land capability class, nonirrigated: 8s

Hydric soil: no

Hydrologic group: A

Potential frost action: low

Representative soil profile:

Texture

A --	0 to 14 in	sand
C1 --	14 to 60 in	sand
C2 --	60 to 80 in	coarse sand

Permeability

Available water

capacity

pH

rapid	0.7 to 1.4 in	6.6 to 7.3
rapid	2.3 to 3.7 in	6.6 to 7.3
very rapid	0.6 to 1.0 in	7.4 to 8.4

1030--Pits, gravel-Udipsamments complex

Pits, gravel

Extent: 75 percent of the unit

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

Slope gradient: 1 to 50 percent

Parent material:

Restrictive feature(s):

Flooding:

Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

outwash *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 shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

1030--Pits, gravel-Udipsamments complex

Udipsamments

Extent: 25 percent of the unit

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

Slope gradient: 0 to 25 percent

Parent material:

Restrictive feature(s):

Flooding:

Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

outwash *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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1031--Seelyeville muck, ponded, 0 to 1 percent slopes

Seelyeville, ponded

Extent: 85 percent of the unit

Landform(s): depressions on interdrumlins, depressions on outwash plains

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): 3

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

organic material *Kw (surface layer):* .02

Land capability class, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential 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 13 in	muck	moderately rapid	4.5 to 5.8 in	
Oa2 -- 13 to 60 in	muck	moderately rapid	16.4 to 21.1 in	

1364--Rock outcrop-Udipsamments complex

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

1364--Rock outcrop-Udipsamments complex

Rock outcrop

Extent: 75 percent of the unit
Landform(s): stream terraces
Slope gradient: 0 to 2 percent
Parent material:
Restrictive feature(s): lithic bedrock at 0 to 4 inches
Flooding: none
Ponding: none
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG): 8
Wind erodibility index (WEI): 0
Kw (surface layer):
Land capability class, nonirrigated: 8s
Hydric soil: no
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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Udipsamments

Extent: 25 percent of the unit
Landform(s): stream terraces
Slope gradient: 0 to 6 percent
Parent material:
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 220
 outwash *Kw (surface layer):* .15
Land capability class, nonirrigated: 8s
Hydric soil: no
Hydrologic group: A
Potential 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 14 in	loamy sand	rapid	0.7 to 1.4 in	6.6 to 7.3
C1 -- 14 to 60 in	sand	rapid	2.3 to 3.7 in	6.6 to 7.3
C2 -- 60 to 80 in	coarse sand	very rapid	0.6 to 1.0 in	7.4 to 8.4

1946--Fordum-Winterfield complex, 0 to 2 percent slopes, frequently flooded

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

1946--Fordum-Winterfield complex, 0 to 2 percent slopes, frequently flooded

Fordum, frequently flooded

Extent: 65 percent of the unit

Landform(s): flood plains

Slope gradient: 0 to 1 percent

Parent material:

Restrictive feature(s):

Flooding: frequent

Ponding: none

Drainage class: very poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

alluvium *Kw (surface layer):* .20

Land capability class, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: D

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 6 in	fine sandy loam
Cg1 --	6 to 36 in	fine sandy loam
Cg2 --	36 to 60 in	sand

Permeability

Available water

capacity

pH

moderately rapid	0.6 to 1.1 in	4.5 to 8.4
moderately rapid	3.0 to 6.6 in	4.5 to 8.4
rapid	1.0 to 2.4 in	5.6 to 8.4

Winterfield, frequently flooded

Extent: 20 percent of the unit

Landform(s): flood plains

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s):

Flooding: frequent

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

alluvium *Kw (surface layer):* .17

Land capability class, nonirrigated: 4w

Hydric soil: no

Hydrologic group: A

Potential frost action: moderate

Representative soil profile:

Texture

A --	0 to 8 in	loamy fine sand
C --	8 to 60 in	loamy fine sand

Permeability

Available water

capacity

pH

rapid	0.8 to 0.9 in	5.6 to 7.8
rapid	2.1 to 5.2 in	5.6 to 8.4

1976B--Brainerd sandy loam, 0 to 5 percent slopes, very stony

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

1976B--Brainerd sandy loam, 0 to 5 percent slopes, very stony

Brainerd, very stony

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 0 to 5 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 6s

Hydric soil: no

Hydrologic group: C

Potential frost action: moderate

Representative soil profile:

Texture

A --	0 to 8 in	sandy loam
E --	8 to 13 in	sandy loam
Bt --	13 to 25 in	sandy loam
BC --	25 to 40 in	sandy loam
Cd --	40 to 60 in	sandy loam

Permeability

moderately rapid
moderately rapid
moderate
slow
very slow

Available water

capacity

1.0 to 1.4 in
0.6 to 0.8 in
1.5 to 2.0 in
1.2 to 1.8 in
0.8 to 1.6 in

pH

4.5 to 6.0
4.5 to 6.0
5.1 to 6.5
5.1 to 7.3
5.6 to 7.3

1977--Mora loam, 0 to 3 percent slopes, very stony

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

1977--Mora loam, 0 to 3 percent slopes, very stony

Mora, very stony

Extent: 90 percent of the unit

Landform(s): drumlins

Slope gradient: 0 to 3 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .28

Land capability class, nonirrigated: 6s

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>
A --	0 to 4 in	loam	moderate	0.7 to 0.8 in	5.1 to 6.5
E --	4 to 12 in	fine sandy loam	moderately rapid	1.1 to 1.5 in	5.1 to 6.5
Bt --	12 to 24 in	fine sandy loam	moderate	1.8 to 2.3 in	5.6 to 6.5
BC --	24 to 48 in	fine sandy loam	slow	1.9 to 2.9 in	5.6 to 7.3
Cd --	48 to 60 in	fine sandy loam	very slow	0.5 to 0.9 in	5.6 to 7.3

1978--Nokay fine sandy loam, 0 to 2 percent slopes, very stony

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

1978--Nokay fine sandy loam, 0 to 2 percent slopes, very stony

Nokay, very stony

Extent: 90 percent of the unit

Landform(s): interdrumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

till *Kw (surface layer):* .24

Land capability class, nonirrigated: 6s

Hydric soil: no

Hydrologic group: C

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>
A -- 0 to 7 in	fine sandy loam	moderately rapid	0.9 to 1.3 in	4.5 to 5.5
E -- 7 to 16 in	sandy loam	moderately rapid	1.1 to 1.7 in	4.5 to 5.5
Bt -- 16 to 22 in	sandy loam	moderate	0.7 to 1.1 in	5.1 to 6.5
BC -- 22 to 40 in	sandy loam	slow	1.4 to 2.2 in	5.6 to 7.3
Cd -- 40 to 60 in	sandy loam	very slow	0.8 to 1.6 in	5.6 to 7.3

1979--Parent loam, 0 to 1 percent slopes, very stony

Parent, very stony

Extent: 90 percent of the unit

Landform(s): flats on interdrumlins

Slope gradient: 0 to 1 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 48

till *Kw (surface layer):* .32

Land capability class, nonirrigated: 6s

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>
A -- 0 to 7 in	loam	moderate	1.4 to 1.6 in	5.6 to 7.3
Bg -- 7 to 28 in	fine sandy loam	moderate	2.5 to 3.5 in	5.6 to 7.3
2BC -- 28 to 40 in	fine sandy loam	slow	1.0 to 1.5 in	6.1 to 7.3
2Cd -- 40 to 60 in	fine sandy loam	very slow	0.8 to 1.6 in	6.1 to 8.4

This report shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

1979--Parent loam, 0 to 1 percent slopes, very stony

1980--Ronneby loam, 0 to 2 percent slopes, very stony

Ronneby, very stony

Extent: 90 percent of the unit

Landform(s): interdrumlins

Slope gradient: 0 to 2 percent

Parent material:

Restrictive feature(s): dense material at 40 to 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

till *Kw (surface layer):* .32

Land capability class, nonirrigated: 6s

Hydric soil: no

Hydrologic group: C

Potential frost action: high

Representative soil profile:

Texture

A --	0 to 4 in	loam
E --	4 to 12 in	fine sandy loam
Bt1,2 --	12 to 33 in	fine sandy loam
Bt3 --	33 to 45 in	fine sandy loam
Cd --	45 to 60 in	fine sandy loam

Permeability

moderate
moderately rapid
moderate
slow
very slow

Available water

capacity

0.7 to 0.9 in
0.9 to 1.5 in
2.6 to 4.0 in
0.9 to 1.4 in
0.6 to 1.2 in

pH

5.1 to 6.5
5.1 to 6.5
5.6 to 6.5
5.6 to 7.3
5.6 to 7.3

W--Water

Water

Extent: 100 percent of the unit

Landform(s):

Slope gradient:

Parent material:

Restrictive feature(s):

Flooding:

Ponding:

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 shows only the major soils in each map unit

Map Unit Description (MN)

Benton 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]

W--Water

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.