

Map Unit Description (MN)

Anoka 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]

Af--Alluvial land, mixed, frequently flooded

Alluvial land, frequently flooded

Extent: 100 percent of the unit

Landform(s): alluvial flats on flood plains

Slope gradient: 0 to 1 percent

Parent material: alluvium

Restrictive feature(s): greater than 60 inches

Flooding: frequent

Ponding: none

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: D

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 6 in	loamy sand	rapid	0.41 to 0.77 in	6.6 to 8.4
Cg -- 6 to 28 in	sandy loam	moderately rapid	1.10 to 4.85 in	5.1 to 7.3
2Cg -- 28 to 80 in	sand	rapid	1.56 to 5.20 in	5.6 to 7.3

AnA--Anoka loamy fine sand, 0 to 2 percent slopes

Anoka

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loamy fine sand	rapid	0.71 to 1.26 in	5.1 to 6.5
E, E&Bt -- 8 to 60 in	fine sand	rapid	3.12 to 8.31 in	5.1 to 6.5
C -- 60 to 80 in	fine sand	rapid	1.20 to 2.41 in	5.6 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

AnB--Anoka loamy fine sand, 2 to 6 percent slopes

Anoka

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loamy fine sand	rapid	0.71 to 1.26 in	5.1 to 6.5
E, E&Bt -- 8 to 60 in	fine sand	rapid	3.12 to 8.31 in	5.1 to 6.5
C -- 60 to 80 in	fine sand	rapid	1.20 to 2.41 in	5.6 to 7.3

AnC--Anoka loamy fine sand, 6 to 12 percent slopes

Anoka

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loamy fine sand	rapid	0.71 to 1.26 in	5.1 to 6.5
E, E&Bt -- 8 to 60 in	fine sand	rapid	3.12 to 8.31 in	5.1 to 6.5
C -- 60 to 80 in	fine sand	rapid	1.20 to 2.41 in	5.6 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

Ba--Becker very fine sandy loam

Becker

Extent: 85 percent of the unit

Landform(s): flood plains, stream terraces

Slope gradient: 0 to 3 percent

Parent material: alluvium

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated: 2s

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	very fine sandy loam	moderately rapid	1.57 to 1.97 in	5.1 to 7.3
A1,A3 -- 10 to 35 in	very fine sandy loam	moderately rapid	3.78 to 5.04 in	5.1 to 7.3
Bw -- 35 to 39 in	very fine sandy loam	moderately rapid	0.59 to 0.75 in	5.6 to 7.8
2C -- 39 to 80 in	coarse sand	rapid	0.82 to 4.09 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

Bm--Blomford loamy fine sand

Blomford

Extent: 85 percent of the unit

Landform(s): swales on moraines

Slope gradient: 0 to 2 percent

Parent material: outwash over till and/or lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 3w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loamy fine sand	rapid	0.72 to 1.09 in	5.1 to 7.3
E, E&Bt -- 9 to 33 in	fine sand	rapid	1.20 to 1.92 in	5.1 to 7.3
2Btg -- 33 to 42 in	fine sandy loam	moderate	1.18 to 1.54 in	5.1 to 7.3
2Cg -- 42 to 60 in	fine sandy loam	moderate	1.77 to 2.66 in	6.1 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

BtB--Braham loamy fine sand, 2 to 6 percent slopes

Braham

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 2 to 6 percent

Parent material: outwash over till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loamy fine sand	rapid	0.91 to 1.09 in	5.6 to 7.3
E -- 9 to 21 in	loamy fine sand	rapid	0.94 to 1.18 in	5.6 to 7.3
2Bt -- 21 to 46 in	sandy clay loam	moderate	3.78 to 4.54 in	5.1 to 7.3
2Bk -- 46 to 60 in	sandy clay loam	moderate	2.07 to 2.48 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

BtC--Braham loamy fine sand, 6 to 18 percent slopes

Braham

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 6 to 18 percent

Parent material: outwash over till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap --	0 to 9 in	loamy fine sand	rapid	0.91 to 1.09 in	5.6 to 7.3
E --	9 to 21 in	loamy fine sand	rapid	0.94 to 1.18 in	5.6 to 7.3
2Bt --	21 to 46 in	sandy clay loam	moderate	3.78 to 4.54 in	5.1 to 7.3
2Bk --	46 to 60 in	sandy clay loam	moderate	2.07 to 2.48 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

Bx--Brickton silt loam

Brickton

Extent: 85 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 2 percent

Parent material: lacustrine

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .43

Land capability, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E -- 7 to 9 in	silt loam	moderate	0.31 to 0.43 in	5.6 to 7.3
Btg -- 9 to 40 in	silty clay	moderately slow	3.73 to 5.91 in	5.6 to 7.8
C -- 40 to 60 in	silt loam	moderately slow	2.36 to 4.33 in	7.4 to 8.4

Cb--Cathro muck

Cathro

Extent: 85 percent of the unit

Landform(s): depressions on moraines

Slope gradient: 0 to 1 percent

Parent material: organic material over till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .02

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa1,Oa2 -- 0 to 30 in	muck	moderately rapid	13.46 to 16.46 in	
2A -- 30 to 38 in	mucky silt loam	moderate	0.87 to 1.73 in	
2Cg -- 38 to 80 in	silt loam	moderate	4.63 to 9.27 in	

Map Unit Description (MN)

Anoka County, Minnesota

CkB--Chetek sandy loam, 2 to 6 percent slopes

Chetek

Extent: 85 percent of the unit

Landform(s): moraines, outwash plains

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	sandy loam	moderate	0.79 to 1.18 in	5.1 to 7.3
Bt -- 8 to 17 in	sandy loam	rapid	0.36 to 1.18 in	5.1 to 7.3
2C -- 17 to 60 in	gravelly coarse sand	rapid	0.86 to 1.72 in	5.1 to 7.3

CkC--Chetek sandy loam, 6 to 12 percent slopes

Chetek

Extent: 85 percent of the unit

Landform(s): moraines, outwash plains

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	sandy loam	moderate	0.79 to 1.18 in	5.1 to 7.3
Bt -- 8 to 17 in	sandy loam	rapid	0.36 to 1.18 in	5.1 to 7.3
2C -- 17 to 60 in	gravelly coarse sand	rapid	0.86 to 1.72 in	5.1 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

Cu--Cut and fill land

Cut and fill land

Extent: 100 percent of the unit

Landform(s): moraines

Slope gradient: 0 to 2 percent

Parent material: variable soil material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil: no

Hydrologic group:

Potential for frost action:

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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DIA--Dalbo silt loam, 1 to 5 percent slopes

Dalbo

Extent: 85 percent of the unit

Landform(s): lake plains

Slope gradient: 1 to 5 percent

Parent material: lacustrine

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .43

Land capability, nonirrigated: 2e

Hydric soil: no

Hydrologic group: C

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
Bt -- 6 to 28 in	clay	moderately slow	2.20 to 3.97 in	5.1 to 7.3
C -- 28 to 60 in	silty clay loam	moderately slow	5.10 to 7.02 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

DnA--Dickman sandy loam, 0 to 2 percent slopes

Dickman

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	5.6 to 6.5
Bw -- 12 to 18 in	sandy loam	moderately rapid	0.76 to 0.88 in	5.6 to 7.3
2C -- 18 to 60 in	sand	rapid	0.83 to 2.92 in	5.6 to 7.8

DnB--Dickman sandy loam, 2 to 6 percent slopes

Dickman

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 12 in	sandy loam	moderately rapid	1.54 to 1.77 in	5.6 to 6.5
Bw -- 12 to 18 in	sandy loam	moderately rapid	0.76 to 0.88 in	5.6 to 7.3
2C -- 18 to 60 in	sand	rapid	0.83 to 2.92 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

Dp--Duelm loamy coarse sand

Duelm

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .15

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 11 in	loamy coarse sand	rapid	0.88 to 1.32 in	5.6 to 7.3
Bw -- 11 to 42 in	coarse sand	rapid	0.93 to 3.42 in	5.1 to 7.3
C -- 42 to 60 in	coarse sand	rapid	0.35 to 1.24 in	5.6 to 7.8

Du--Dundas loam

Dundas

Extent: 85 percent of the unit

Landform(s): flats on moraines

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	5.1 to 7.3
E -- 10 to 15 in	fine sandy loam	moderate	0.67 to 1.13 in	5.1 to 7.3
Btg -- 15 to 39 in	sandy clay loam	moderate	3.60 to 4.56 in	5.6 to 7.3
Cg -- 39 to 60 in	fine sandy loam	moderate	2.71 to 3.96 in	7.4 to 8.4

Map Unit Description (MN)

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

Emmert

Extent: 90 percent of the unit

Landform(s): moraines, outwash plains

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .10

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	gravelly coarse sandy loam	rapid	0.16 to 0.59 in	5.1 to 6.5
BA,Bw,C -- 4 to 60 in	extremely gravelly coarse sand	very rapid	1.12 to 2.24 in	5.1 to 7.3

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

Emmert

Extent: 90 percent of the unit

Landform(s): moraines, outwash plains

Slope gradient: 12 to 25 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .10

Land capability, nonirrigated: 7s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	gravelly coarse sandy loam	rapid	0.16 to 0.59 in	5.1 to 6.5
BA,Bw,C -- 4 to 60 in	extremely gravelly coarse sand	very rapid	1.12 to 2.24 in	5.1 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

EpC--Emmert complex, 4 to 12 percent slopes

Emmert

Extent: 70 percent of the unit

Landform(s): moraines

Slope gradient: 4 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .10

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	gravelly coarse sandy loam	rapid	0.16 to 0.59 in	5.1 to 6.5
BA,Bw,C -- 4 to 60 in	extremely gravelly coarse sand	very rapid	1.12 to 2.24 in	5.1 to 7.3

Kingsley

Extent: 30 percent of the unit

Landform(s): moraines

Slope gradient: 4 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.31 to 0.57 in	5.6 to 6.5
E -- 3 to 13 in	fine sandy loam	moderate	0.98 to 1.48 in	5.6 to 6.5
Bt -- 13 to 34 in	fine sandy loam	moderately slow	2.71 to 3.34 in	5.1 to 7.3
C -- 34 to 60 in	sandy loam	moderately slow	2.86 to 3.64 in	5.6 to 7.8

Map Unit Description (MN)

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EpD--Emmert complex, 12 to 25 percent slopes

Emmert

Extent: 70 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 25 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .10

Land capability, nonirrigated: 7s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	gravelly coarse sandy loam	rapid	0.16 to 0.59 in	5.1 to 6.5
BA,Bw,C -- 4 to 60 in	extremely gravelly coarse sand	very rapid	1.12 to 2.24 in	5.1 to 7.3

Kingsley

Extent: 30 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 25 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 6e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.31 to 0.57 in	5.6 to 6.5
E -- 3 to 13 in	fine sandy loam	moderate	0.98 to 1.48 in	5.6 to 6.5
Bt -- 13 to 34 in	fine sandy loam	moderately slow	2.71 to 3.34 in	5.1 to 7.3
C -- 34 to 60 in	sandy loam	moderately slow	2.86 to 3.64 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

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

Fordum, frequently flooded

Extent: 50 to 100 percent of the unit

Landform(s): alluvial flats on flood plains

Slope gradient: 0 to 1 percent

Parent material: alluvium

Restrictive feature(s): greater than 60 inches

Flooding: frequent

Ponding: none

Drainage class: very poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .17

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	fine sandy loam	moderately rapid	0.78 to 1.28 in	5.1 to 7.3
Cg -- 7 to 28 in	sandy loam	moderately rapid	2.09 to 4.59 in	5.1 to 7.3
2Cg -- 28 to 80 in	sand	rapid	2.08 to 5.20 in	5.6 to 7.3

Winterfield, frequently flooded

Extent: 20 to 40 percent of the unit

Landform(s): rises on flood plains

Slope gradient: 0 to 2 percent

Parent material: alluvium

Restrictive feature(s): greater than 60 inches

Flooding: frequent

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .05

Land capability, nonirrigated: 4w

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 8 in	loamy fine sand	rapid	0.79 to 0.94 in	5.6 to 7.3
C1,C2 -- 8 to 20 in	sand	rapid	0.73 to 1.34 in	5.6 to 7.3
C3,C5 -- 20 to 80 in	sand	rapid	2.39 to 5.98 in	5.6 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

Gc--Glencoe loam

Glencoe

Extent: 85 percent of the unit

Landform(s): depressions on moraines

Slope gradient: 0 to 1 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated: 3w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loam	moderate	1.81 to 2.17 in	5.6 to 7.3
A -- 9 to 27 in	fine sandy loam	moderate	2.72 to 3.08 in	5.6 to 7.3
Bg -- 27 to 45 in	loam	moderate	2.66 to 3.01 in	5.6 to 7.3
Cg -- 45 to 60 in	fine sandy loam	moderate	2.24 to 2.84 in	7.4 to 8.4

GP--Pits, gravel-Udipsamments complex

Pits, gravel

Extent: 100 percent of the unit

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

Slope gradient: 0 to 50 percent

Parent material: sandy and gravelly outwash

Restrictive feature(s): greater than 60 inches

Flooding:

Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Anoka County, Minnesota

GrA--Growton fine sandy loam, 1 to 4 percent slopes

Growton

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 1 to 4 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 7 in	fine sandy loam	moderately rapid	0.92 to 1.13 in	5.1 to 7.3
E -- 7 to 11 in	sandy loam	moderately rapid	0.43 to 0.59 in	5.1 to 6.5
Bt -- 11 to 37 in	sandy loam	moderate	2.86 to 4.94 in	5.1 to 6.5
2C -- 37 to 60 in	sandy loam	moderate	2.28 to 3.88 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

HdB--Hayden fine sandy loam, 2 to 6 percent slopes

Hayden

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 2 to 6 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap --	0 to 6 in	fine sandy loam	moderately rapid	0.77 to 1.06 in	5.6 to 7.3
E --	6 to 10 in	fine sandy loam	moderately rapid	0.43 to 0.75 in	5.6 to 7.3
Bt --	10 to 37 in	sandy clay loam	moderate	4.07 to 5.16 in	5.6 to 7.8
C --	37 to 60 in	fine sandy loam	moderate	2.51 to 4.34 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

HdC2--Hayden fine sandy loam, 6 to 12 percent slopes, eroded

Hayden, eroded

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	fine sandy loam	moderately rapid	0.77 to 1.06 in	5.6 to 7.3
E -- 6 to 10 in	fine sandy loam	moderately rapid	0.43 to 0.75 in	5.6 to 7.3
Bt -- 10 to 37 in	sandy clay loam	moderate	4.07 to 5.16 in	5.6 to 7.8
C -- 37 to 60 in	fine sandy loam	moderate	2.51 to 4.34 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

HdD--Hayden fine sandy loam, 12 to 24 percent slopes

Hayden

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 24 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	fine sandy loam	moderately rapid	0.77 to 1.06 in	5.6 to 7.3
E -- 6 to 10 in	fine sandy loam	moderately rapid	0.43 to 0.75 in	5.6 to 7.3
Bt -- 10 to 37 in	sandy clay loam	moderate	4.07 to 5.16 in	5.6 to 7.8
C -- 37 to 60 in	fine sandy loam	moderate	2.51 to 4.34 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

HeB--Heyder fine sandy loam, 2 to 6 percent slopes

Heyder

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 2 to 6 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.50 to 0.57 in	5.6 to 7.3
E -- 3 to 22 in	fine sandy loam	moderate	2.27 to 3.40 in	5.6 to 7.3
Bt -- 22 to 53 in	sandy loam	moderate	3.42 to 5.29 in	5.6 to 6.5
C -- 53 to 60 in	sandy loam	moderate	0.74 to 0.87 in	6.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

HeC2--Heyder fine sandy loam, 6 to 12 percent slopes, eroded

Heyder, eroded

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.50 to 0.57 in	5.6 to 7.3
E -- 3 to 22 in	fine sandy loam	moderate	2.27 to 3.40 in	5.6 to 7.3
Bt -- 22 to 53 in	sandy loam	moderate	3.42 to 5.29 in	5.6 to 6.5
C -- 53 to 60 in	sandy loam	moderate	0.74 to 0.87 in	6.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

HeD--Heyder fine sandy loam, 12 to 18 percent slopes

Heyder

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.50 to 0.57 in	5.6 to 7.3
E -- 3 to 22 in	fine sandy loam	moderate	2.27 to 3.40 in	5.6 to 7.3
Bt -- 22 to 53 in	sandy loam	moderate	3.42 to 5.29 in	5.6 to 6.5
C -- 53 to 60 in	sandy loam	moderate	0.74 to 0.87 in	6.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

HeE--Heyder fine sandy loam, 18 to 30 percent slopes

Heyder

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 18 to 30 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 6e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.50 to 0.57 in	5.6 to 7.3
E -- 3 to 22 in	fine sandy loam	moderate	2.27 to 3.40 in	5.6 to 7.3
Bt -- 22 to 53 in	sandy loam	moderate	3.42 to 5.29 in	5.6 to 6.5
C -- 53 to 60 in	sandy loam	moderate	0.74 to 0.87 in	6.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

HIC--Heyder complex, 4 to 12 percent slopes

Heyder

Extent: 70 percent of the unit

Landform(s): moraines

Slope gradient: 4 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.50 to 0.57 in	5.6 to 7.3
E -- 3 to 22 in	fine sandy loam	moderate	2.27 to 3.40 in	5.6 to 7.3
Bt -- 22 to 53 in	sandy loam	moderate	3.42 to 5.29 in	5.6 to 6.5
C -- 53 to 60 in	sandy loam	moderate	0.74 to 0.87 in	6.6 to 7.8

Hayden

Extent: 15 percent of the unit

Landform(s): moraines

Slope gradient: 4 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 6 in	fine sandy loam	moderately rapid	0.77 to 1.06 in	5.6 to 7.3
E -- 6 to 10 in	fine sandy loam	moderately rapid	0.43 to 0.75 in	5.6 to 7.3
Bt -- 10 to 37 in	sandy clay loam	moderate	4.07 to 5.16 in	5.6 to 7.8
C -- 37 to 60 in	fine sandy loam	moderate	2.51 to 4.34 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

HIC--Heyder complex, 4 to 12 percent slopes

Emmert

Extent: 15 percent of the unit

Landform(s): moraines

Slope gradient: 4 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .10

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	gravelly coarse sandy loam	rapid	0.16 to 0.59 in	5.1 to 6.5
BA,Bw,C -- 4 to 60 in	extremely gravelly coarse sand	very rapid	1.12 to 2.24 in	5.1 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

HID--Heyder complex, 12 to 25 percent slopes

Heyder

Extent: 70 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 25 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.50 to 0.57 in	5.6 to 7.3
E -- 3 to 22 in	fine sandy loam	moderate	2.27 to 3.40 in	5.6 to 7.3
Bt -- 22 to 53 in	sandy loam	moderate	3.42 to 5.29 in	5.6 to 6.5
C -- 53 to 60 in	sandy loam	moderate	0.74 to 0.87 in	6.6 to 7.8

Hayden

Extent: 15 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 25 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 6 in	fine sandy loam	moderately rapid	0.77 to 1.06 in	5.6 to 7.3
E -- 6 to 10 in	fine sandy loam	moderately rapid	0.43 to 0.75 in	5.6 to 7.3
Bt -- 10 to 37 in	sandy clay loam	moderate	4.07 to 5.16 in	5.6 to 7.8
C -- 37 to 60 in	fine sandy loam	moderate	2.51 to 4.34 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

HID--Heyder complex, 12 to 25 percent slopes

Emmert

Extent: 15 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 25 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .10

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 4 in	gravelly coarse sandy loam	rapid	0.16 to 0.59 in	5.1 to 6.5
BA,Bw,C -- 4 to 60 in	extremely gravelly coarse sand	very rapid	1.12 to 2.24 in	5.1 to 7.3

HuA--Hubbard coarse sand, 0 to 2 percent slopes

Hubbard

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 160

Kw factor (surface layer) .15

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,AB -- 0 to 20 in	coarse sand	rapid	1.61 to 2.41 in	5.1 to 7.3
Bw -- 20 to 32 in	coarse sand	rapid	0.35 to 0.83 in	5.1 to 7.3
BC,C -- 32 to 60 in	gravelly coarse sand	rapid	0.56 to 1.96 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

HuB--Hubbard coarse sand, 2 to 6 percent slopes

Hubbard

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 160

Kw factor (surface layer) .15

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,AB -- 0 to 20 in	coarse sand	rapid	1.61 to 2.41 in	5.1 to 7.3
Bw -- 20 to 32 in	coarse sand	rapid	0.35 to 0.83 in	5.1 to 7.3
BC,C -- 32 to 60 in	gravelly coarse sand	rapid	0.56 to 1.96 in	5.6 to 7.8

HuC--Hubbard coarse sand, 6 to 12 percent slopes

Hubbard

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 160

Kw factor (surface layer) .15

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,AB -- 0 to 20 in	coarse sand	rapid	1.61 to 2.41 in	5.1 to 7.3
Bw -- 20 to 32 in	coarse sand	rapid	0.35 to 0.83 in	5.1 to 7.3
BC,C -- 32 to 60 in	gravelly coarse sand	rapid	0.56 to 1.96 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

Is--Isan sandy loam

Isan

Extent: 85 percent of the unit

Landform(s): swales on stream terraces

Slope gradient: 0 to 1 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 14 in	sandy loam	moderately rapid	1.42 to 2.13 in	5.6 to 7.3
AB,Bg -- 14 to 34 in	loamy sand	rapid	1.18 to 1.97 in	5.1 to 6.5
Cg -- 34 to 60 in	coarse sand	rapid	0.52 to 1.56 in	5.6 to 7.3

Iw--Isanti fine sandy loam

Isanti

Extent: 85 percent of the unit

Landform(s): swales on outwash plains

Slope gradient: 0 to 1 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	fine sandy loam	moderately rapid	1.28 to 1.77 in	5.1 to 6.5
Bg -- 10 to 31 in	fine sand	rapid	1.28 to 1.70 in	5.1 to 6.5
Cg -- 31 to 60 in	fine sand	rapid	1.44 to 2.01 in	5.6 to 6.5

Map Unit Description (MN)

Anoka County, Minnesota

KmB--Kingsley fine sandy loam, 2 to 6 percent slopes

Kingsley

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 2 to 6 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.31 to 0.57 in	5.6 to 6.5
E -- 3 to 13 in	fine sandy loam	moderate	0.98 to 1.48 in	5.6 to 6.5
Bt -- 13 to 34 in	fine sandy loam	moderately slow	2.50 to 3.34 in	5.1 to 7.3
C -- 34 to 60 in	sandy loam	moderately slow	2.60 to 3.64 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

KmC2--Kingsley fine sandy loam, 6 to 12 percent slopes, eroded

Kingsley, eroded

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 6 to 12 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.31 to 0.57 in	5.6 to 6.5
E -- 3 to 13 in	fine sandy loam	moderate	0.98 to 1.48 in	5.6 to 6.5
Bt -- 13 to 34 in	fine sandy loam	moderately slow	2.50 to 3.34 in	5.1 to 7.3
C -- 34 to 60 in	sandy loam	moderately slow	2.60 to 3.64 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

KmD--Kingsley fine sandy loam, 12 to 18 percent slopes

Kingsley

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 12 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.31 to 0.57 in	5.6 to 6.5
E -- 3 to 13 in	fine sandy loam	moderate	0.98 to 1.48 in	5.6 to 6.5
Bt -- 13 to 34 in	fine sandy loam	moderately slow	2.50 to 3.34 in	5.1 to 7.3
C -- 34 to 60 in	sandy loam	moderately slow	2.60 to 3.64 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

KmE--Kingsley fine sandy loam, 18 to 30 percent slopes

Kingsley

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 18 to 30 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 6e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.31 to 0.57 in	5.6 to 6.5
E -- 3 to 13 in	fine sandy loam	moderate	0.98 to 1.48 in	5.6 to 6.5
Bt -- 13 to 34 in	fine sandy loam	moderately slow	2.50 to 3.34 in	5.1 to 7.3
C -- 34 to 60 in	sandy loam	moderately slow	2.60 to 3.64 in	5.6 to 7.8

Kr--Kratka loamy fine sand

Kratka

Extent: 85 percent of the unit

Landform(s): swales on moraines

Slope gradient: 0 to 1 percent

Parent material: outwash over till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	loamy fine sand	rapid	0.98 to 1.18 in	5.6 to 7.3
Bg -- 10 to 30 in	fine sand	rapid	1.20 to 2.21 in	5.6 to 7.3
2Bg,2Cg -- 30 to 60 in	fine sandy loam	moderate	3.29 to 5.69 in	6.1 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

Lb--Lake beaches

Beaches, lake

Extent: 100 percent of the unit

Landform(s): shorelines

Slope gradient: 0 to 3 percent

Parent material: sandy beach sediments

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 180

Kw factor (surface layer) .15

Land capability, nonirrigated: 4w

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 5 in	sand	rapid	0.20 to 0.36 in	6.1 to 7.8
C -- 5 to 80 in	gravelly coarse sand	rapid	1.50 to 7.48 in	7.4 to 8.4

LgB--Langola loamy sand, 0 to 6 percent slopes

Langola

Extent: 85 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 6 percent

Parent material: outwash over till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .15

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: C

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	loamy sand	rapid	0.98 to 1.18 in	5.1 to 6.5
Bw -- 10 to 31 in	loamy sand	rapid	1.70 to 2.13 in	5.1 to 6.5
2Bt -- 31 to 38 in	sandy loam	moderate	0.57 to 1.06 in	5.1 to 6.5
2Cd -- 38 to 60 in	sandy loam	slow	0.65 to 2.17 in	5.6 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

LnA--Lino loamy fine sand, 0 to 4 percent slopes

Lino

Extent: 85 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 4 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loamy fine sand	rapid	0.79 to 0.94 in	5.1 to 6.0
Bw -- 8 to 38 in	fine sand	rapid	1.80 to 2.39 in	5.1 to 6.0
Cg -- 38 to 80 in	fine sand	rapid	2.11 to 2.95 in	5.1 to 6.5

Lw--Loamy wet land

Loamy wet land

Extent: 85 percent of the unit

Landform(s): swales on moraines, swales on outwash plains

Slope gradient: 0 to 1 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 21 in	loam	moderate	4.17 to 5.01 in	5.6 to 7.3
Bg -- 21 to 43 in	loam	moderate	3.31 to 3.75 in	5.6 to 7.3
Cg -- 43 to 60 in	loam	moderate	2.54 to 3.22 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

Lx--Lupton muck

Lupton

Extent: 85 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material: organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .02

Land capability, nonirrigated: 7w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oap -- 0 to 9 in	muck	moderately rapid	3.17 to 4.07 in	
Oa -- 9 to 60 in	muck	moderately rapid	17.78 to 22.85 in	

M-W--Water, miscellaneous

Water, miscellaneous

Extent: 100 percent of the unit

Landform(s):

Slope gradient:

Parent material:

Restrictive feature(s): greater than 60 inches

Flooding:

Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Map Unit Description (MN)

Anoka County, Minnesota

Ma--Markey muck

Markey

Extent: 85 percent of the unit

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

Slope gradient: 0 to 1 percent

Parent material: organic material over outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .02

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oap,Oa2,Oa3 - 0 to 31 in	muck	moderately rapid	10.89 to 14.00 in	
2A -- 31 to 36 in	fine sandy loam	rapid	0.14 to 0.66 in	
2Cg -- 36 to 80 in	fine sand	rapid	1.32 to 3.53 in	

Mc--Marsh

Marsh

Extent: 100 percent of the unit

Landform(s): depressions

Slope gradient: 0 to 1 percent

Parent material: organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa1 -- 0 to 15 in	muck	moderately rapid	5.24 to 6.73 in	
Oa2,Oa3 -- 15 to 80 in	muck	moderately rapid	22.74 to 29.23 in	

Map Unit Description (MN)

Anoka County, Minnesota

Me--Meehan sand

Meehan

Extent: 85 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 180

Kw factor (surface layer) .15

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	sand	rapid	0.55 to 0.71 in	5.1 to 6.5
Bw -- 8 to 40 in	sand	rapid	1.94 to 3.55 in	5.1 to 6.5
C -- 40 to 60 in	sand	rapid	0.39 to 1.38 in	5.6 to 7.3

Mk--Millerville mucky peat

Millerville

Extent: 85 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material: organic material over coprogenous earth

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .02

Land capability, nonirrigated: 7w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oe, Oa -- 0 to 30 in	mucky peat	moderately rapid	13.46 to 16.46 in	
Lco -- 30 to 60 in	coprogenous earth	moderately rapid	5.98 to 10.47 in	

Map Unit Description (MN)

Anoka County, Minnesota

MoA--Mora fine sandy loam, 1 to 4 percent slopes

Mora

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 1 to 4 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	fine sandy loam	moderately rapid	1.18 to 1.42 in	5.1 to 6.5
E -- 8 to 15 in	fine sandy loam	moderately rapid	0.99 to 1.20 in	5.1 to 6.5
Bt -- 15 to 22 in	fine sandy loam	moderate	1.06 to 1.20 in	5.6 to 6.5
BC -- 22 to 41 in	fine sandy loam	moderately slow	1.51 to 3.02 in	5.6 to 7.3
C -- 41 to 60 in	sandy loam	moderately slow	1.51 to 2.65 in	5.6 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

NeA--Nessel fine sandy loam, 1 to 4 percent slopes

Nessel

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 1 to 4 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	fine sandy loam	moderately rapid	1.18 to 1.63 in	5.6 to 7.3
E -- 9 to 16 in	fine sandy loam	moderately rapid	0.78 to 1.35 in	5.6 to 7.3
Bt -- 16 to 40 in	sandy clay loam	moderate	3.60 to 4.56 in	5.6 to 7.8
C -- 40 to 60 in	fine sandy loam	moderate	2.95 to 3.74 in	7.4 to 8.4

No--Nowen sandy loam

Nowen

Extent: 85 percent of the unit

Landform(s): swales on moraines

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 15 in	sandy loam	moderate	2.09 to 2.69 in	5.6 to 7.3
Btg -- 15 to 49 in	fine sandy loam	moderate	4.74 to 5.42 in	5.6 to 7.3
Cg -- 49 to 60 in	sandy loam	moderate	0.99 to 1.54 in	6.1 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

NrD--Nymore loamy coarse sand, 12 to 25 percent slopes

Nymore

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 12 to 25 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 7s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	loamy coarse sand	rapid	0.71 to 0.85 in	5.1 to 6.5
Bw -- 7 to 26 in	loamy sand	rapid	0.57 to 1.51 in	5.1 to 7.3
C -- 26 to 60 in	sand	rapid	0.68 to 2.71 in	5.1 to 7.8

NyA--Nymore loamy sand, 0 to 2 percent slopes

Nymore

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	loamy sand	rapid	0.71 to 0.85 in	5.1 to 6.5
Bw -- 7 to 26 in	loamy sand	rapid	0.57 to 1.51 in	5.1 to 7.3
C -- 26 to 60 in	sand	rapid	0.68 to 2.71 in	5.1 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

NyB--Nymore loamy sand, 2 to 6 percent slopes

Nymore

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	loamy sand	rapid	0.71 to 0.85 in	5.1 to 6.5
Bw -- 7 to 26 in	loamy sand	rapid	0.57 to 1.51 in	5.1 to 7.3
C -- 26 to 60 in	sand	rapid	0.68 to 2.71 in	5.1 to 7.8

NyC--Nymore loamy sand, 6 to 12 percent slopes

Nymore

Extent: 90 percent of the unit

Landform(s): stream terraces

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 7 in	loamy sand	rapid	0.71 to 0.85 in	5.1 to 6.5
Bw -- 7 to 26 in	loamy sand	rapid	0.57 to 1.51 in	5.1 to 7.3
C -- 26 to 60 in	sand	rapid	0.68 to 2.71 in	5.1 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

Rf--Rifle mucky peat

Rifle

Extent: 85 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material: organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .02

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oe1 -- 0 to 8 in	mucky peat	moderately rapid	3.78 to 4.57 in	
Oe2 -- 8 to 60 in	mucky peat	moderately rapid	24.94 to 30.14 in	

Rg--Rifle muck, woody

Rifle, woody

Extent: 85 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material: organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .02

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa1 -- 0 to 8 in	muck	moderately rapid	3.78 to 4.57 in	
Oa2 -- 8 to 60 in	muck	moderately rapid	24.94 to 30.14 in	

Map Unit Description (MN)

Anoka County, Minnesota

Rh--Rifle soils, ponded

Rifle, ponded

Extent: 85 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material: organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .02

Land capability, nonirrigated: 8w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa1 -- 0 to 8 in	muck	moderately rapid	3.78 to 4.57 in	
Oa2 -- 8 to 60 in	muck	moderately rapid	24.94 to 30.14 in	

Ru--Rondeau muck

Rondeau

Extent: 85 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material: organic material over marl

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .02

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa -- 0 to 44 in	muck	moderately rapid	15.43 to 21.17 in	
Lco -- 44 to 49 in	coprogenous earth	moderately rapid	0.94 to 1.04 in	
Lma -- 49 to 60 in	marl	moderately rapid	2.20 to 2.43 in	

Map Unit Description (MN)

Anoka County, Minnesota

Ry--Ronneby fine sandy loam

Ronneby

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 2w

Hydric soil: no

Hydrologic group: B

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 5 in	fine sandy loam	moderately rapid	0.67 to 0.92 in	5.1 to 6.5
Eg -- 5 to 15 in	fine sandy loam	moderately rapid	1.18 to 1.87 in	5.1 to 6.5
Btg -- 15 to 32 in	fine sandy loam	moderate	2.03 to 3.22 in	5.1 to 6.5
BC -- 32 to 42 in	fine sandy loam	moderately slow	1.33 to 1.64 in	5.6 to 7.3
C -- 42 to 60 in	fine sandy loam	moderately slow	1.95 to 2.48 in	5.6 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

SbB--Sartell fine sand, 2 to 6 percent slopes

Sartell

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .15

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	fine sand	rapid	0.63 to 1.00 in	4.5 to 6.0
Bw -- 9 to 26 in	fine sand	rapid	1.02 to 1.69 in	5.1 to 6.0
C -- 26 to 60 in	fine sand	rapid	1.69 to 2.71 in	5.6 to 7.3

SbC--Sartell fine sand, 6 to 12 percent slopes

Sartell

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .15

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	fine sand	rapid	0.63 to 1.00 in	4.5 to 6.0
Bw -- 9 to 26 in	fine sand	rapid	1.02 to 1.69 in	5.1 to 6.0
C -- 26 to 60 in	fine sand	rapid	1.69 to 2.71 in	5.6 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

SbC2--Sartell fine sand, 6 to 12 percent slopes, eroded

Sartell, eroded

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .15

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	fine sand	rapid	0.63 to 1.00 in	4.5 to 6.0
Bw -- 9 to 26 in	fine sand	rapid	1.02 to 1.69 in	5.1 to 6.0
C -- 26 to 60 in	fine sand	rapid	1.69 to 2.71 in	5.6 to 7.3

SbD2--Sartell fine sand, 12 to 24 percent slopes, eroded

Sartell, eroded

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 12 to 24 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .15

Land capability, nonirrigated: 7s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	fine sand	rapid	0.81 to 1.00 in	4.5 to 6.0
Bw -- 9 to 26 in	fine sand	rapid	1.02 to 1.69 in	5.1 to 6.0
C -- 26 to 60 in	fine sand	rapid	1.69 to 3.05 in	5.6 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

Se--Seelyeville muck

Seelyeville

Extent: 85 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material: organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .02

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oap -- 0 to 10 in	muck	moderately rapid	3.44 to 4.43 in	
Oa2,Oa5 -- 10 to 60 in	muck	moderately rapid	17.50 to 22.50 in	

SoA--Soderville fine sand, 0 to 3 percent slopes

Soderville

Extent: 85 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 3 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .15

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	fine sand	rapid	0.72 to 1.09 in	5.1 to 6.5
E -- 9 to 36 in	loamy fine sand	rapid	1.61 to 2.14 in	5.1 to 6.5
Bt -- 36 to 46 in	loamy fine sand	rapid	0.61 to 1.13 in	5.1 to 6.5
C -- 46 to 60 in	fine sand	rapid	0.69 to 1.38 in	5.1 to 6.5

Map Unit Description (MN)

Anoka County, Minnesota

Ub--Urban land-Becker complex, 0 to 3 percent slopes

Urban land

Extent: 85 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 3 percent

Parent material: variable sandy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 15 percent of the unit

Landform(s): flood plains on stream terraces

Slope gradient: 0 to 3 percent

Parent material: alluvium

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated: 2s

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	very fine sandy loam	moderately rapid	1.57 to 1.97 in	5.1 to 7.3
A1,A3 -- 10 to 35 in	very fine sandy loam	moderately rapid	3.78 to 5.04 in	5.1 to 7.3
Bw -- 35 to 39 in	very fine sandy loam	moderately rapid	0.59 to 0.75 in	5.6 to 7.8
2C -- 39 to 80 in	coarse sand	rapid	0.82 to 4.09 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

Ud--Urban land-Dundas complex, 0 to 3 percent slopes

Urban land

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 0 to 3 percent

Parent material: variable loamy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 15 percent of the unit

Landform(s): flats on moraines

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	5.1 to 7.3
E -- 10 to 15 in	fine sandy loam	moderate	0.67 to 1.13 in	5.1 to 7.3
Btg -- 15 to 39 in	sandy clay loam	moderate	3.60 to 4.56 in	5.6 to 7.3
Cg -- 39 to 60 in	fine sandy loam	moderate	2.71 to 3.96 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

UhdC--Urban land-Hayden complex, 3 to 15 percent slopes

Urban land

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 3 to 15 percent

Parent material: variable loamy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 15 percent of the unit

Landform(s): moraines

Slope gradient: 3 to 15 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	fine sandy loam	moderately rapid	0.77 to 1.06 in	5.6 to 7.3
E -- 6 to 10 in	fine sandy loam	moderately rapid	0.43 to 0.75 in	5.6 to 7.3
Bt -- 10 to 37 in	sandy clay loam	moderate	4.07 to 5.16 in	5.6 to 7.8
C -- 37 to 60 in	fine sandy loam	moderate	2.51 to 4.34 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

UhdD--Urban land-Hayden complex, 15 to 25 percent slopes

Urban land

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 15 to 25 percent

Parent material: variable loamy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 15 percent of the unit

Landform(s): moraines

Slope gradient: 15 to 25 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 6e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 6 in	fine sandy loam	moderately rapid	0.77 to 1.06 in	5.6 to 7.3
E -- 6 to 10 in	fine sandy loam	moderately rapid	0.43 to 0.75 in	5.6 to 7.3
Bt -- 10 to 37 in	sandy clay loam	moderate	4.07 to 5.16 in	5.6 to 7.8
C -- 37 to 60 in	fine sandy loam	moderate	2.51 to 4.34 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

UhuB--Urban land-Hubbard complex, 0 to 8 percent slopes

Urban land

Extent: 35 to 80 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 8 percent

Parent material: variable sandy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 0 to 20 percent of the unit

Landform(s): stream terraces

Slope gradient: 0 to 8 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .15

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 18 in	loamy sand	rapid	1.45 to 2.17 in	5.1 to 7.3
Bw -- 18 to 23 in	loamy sand	rapid	0.14 to 0.33 in	5.1 to 7.3
BC,C -- 23 to 80 in	sand	rapid	1.71 to 4.00 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

Ui--Urban land-Isanti complex, 0 to 2 percent slopes

Urban land

Extent: 85 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 2 percent

Parent material: variable sandy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 15 percent of the unit

Landform(s): swales on outwash plains

Slope gradient: 0 to 1 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 6w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	fine sandy loam	moderately rapid	1.28 to 1.77 in	5.1 to 6.5
Bg -- 10 to 31 in	fine sand	rapid	1.28 to 1.70 in	5.1 to 6.5
Cg -- 31 to 60 in	fine sand	rapid	1.44 to 2.01 in	5.6 to 6.5

Map Unit Description (MN)

Anoka County, Minnesota

UKD--Urban land-Kingsley complex, 15 to 25 percent slopes

Urban land

Extent: 85 percent of the unit

Landform(s): moraines

Slope gradient: 15 to 25 percent

Parent material: variable loamy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 15 percent of the unit

Landform(s): moraines

Slope gradient: 15 to 18 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	fine sandy loam	moderate	0.31 to 0.57 in	5.6 to 6.5
E -- 3 to 13 in	fine sandy loam	moderate	0.98 to 1.48 in	5.6 to 6.5
Bt -- 13 to 34 in	fine sandy loam	moderately slow	2.50 to 3.34 in	5.1 to 7.3
C -- 34 to 60 in	sandy loam	moderately slow	2.60 to 3.64 in	5.6 to 7.8

Map Unit Description (MN)

Anoka County, Minnesota

Un--Urban land-Lino complex, 0 to 3 percent slopes

Urban land

Extent: 85 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 3 percent

Parent material: variable sandy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 15 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 3 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: A

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loamy fine sand	rapid	0.79 to 0.94 in	5.1 to 6.0
Bw -- 8 to 38 in	fine sand	rapid	1.80 to 2.39 in	5.1 to 6.0
Cg -- 38 to 80 in	fine sand	rapid	2.11 to 2.95 in	5.1 to 6.5

Map Unit Description (MN)

Anoka County, Minnesota

UuB--Urban land-Udorthents (cut and fill land) complex, 0 to 6 percent slopes

Urban land

Extent: 35 to 80 percent of the unit

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

Slope gradient: 0 to 6 percent

Parent material: variable loamy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Udorthents, cut and fill land

Extent: 20 to 65 percent of the unit

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

Slope gradient: 0 to 6 percent

Parent material: variable loamy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Map Unit Description (MN)

Anoka County, Minnesota

Uw--Urban land-Udorthent, wet substratum complex, 0 to 2 percent slopes

Urban land

Extent: 65 to 90 percent of the unit

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

Slope gradient: 0 to 2 percent

Parent material: variable loamy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Udorthents, wet substratum

Extent: 10 to 35 percent of the unit

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

Slope gradient: 0 to 2 percent

Parent material: variable soil material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Map Unit Description (MN)

Anoka County, Minnesota

UzB--Urban land-Zimmerman complex, 0 to 8 percent slopes

Urban land

Extent: 85 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 8 percent

Parent material: variable sandy material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

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

Extent: 15 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 8 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .17

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	fine sand	rapid	0.69 to 1.08 in	5.1 to 6.5
E,E&Bt -- 10 to 60 in	fine sand	rapid	3.00 to 5.00 in	5.1 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

W--Water

Water

Extent: 100 percent of the unit

Landform(s):

Slope gradient:

Parent material:

Restrictive feature(s): greater than 60 inches

Flooding:

Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated:

Hydric soil:

Hydrologic group:

Potential for frost action:

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
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Wb--Webster loam

Webster

Extent: 85 percent of the unit

Landform(s): swales on moraines

Slope gradient: 0 to 2 percent

Parent material: till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	5.1 to 7.3
A -- 10 to 16 in	loam	moderate	0.82 to 1.39 in	5.1 to 7.3
Bg -- 16 to 23 in	sandy clay loam	moderate	1.07 to 1.27 in	5.6 to 7.3
Cg -- 23 to 60 in	fine sandy loam	moderate	5.55 to 7.03 in	7.4 to 8.4

Map Unit Description (MN)

Anoka County, Minnesota

ZmA--Zimmerman fine sand, 0 to 2 percent slopes

Zimmerman

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 0 to 2 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .17

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	fine sand	rapid	0.69 to 1.08 in	5.1 to 6.5
E,E&Bt -- 10 to 60 in	fine sand	rapid	3.00 to 5.00 in	5.1 to 7.3

ZmB--Zimmerman fine sand, 2 to 6 percent slopes

Zimmerman

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 2 to 6 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .17

Land capability, nonirrigated: 4s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	fine sand	rapid	0.69 to 1.08 in	5.1 to 6.5
E,E&Bt -- 10 to 60 in	fine sand	rapid	3.00 to 5.00 in	5.1 to 7.3

Map Unit Description (MN)

Anoka County, Minnesota

ZmC--Zimmerman fine sand, 6 to 12 percent slopes

Zimmerman

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 6 to 12 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .17

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	fine sand	rapid	0.69 to 1.08 in	5.1 to 6.5
E,E&Bt -- 10 to 60 in	fine sand	rapid	3.00 to 5.00 in	5.1 to 7.3

ZmD--Zimmerman fine sand, 12 to 24 percent slopes

Zimmerman

Extent: 90 percent of the unit

Landform(s): outwash plains

Slope gradient: 12 to 24 percent

Parent material: outwash

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 220

Kw factor (surface layer) .17

Land capability, nonirrigated: 6s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	fine sand	rapid	0.69 to 1.08 in	5.1 to 6.5
E,E&Bt -- 10 to 60 in	fine sand	rapid	3.00 to 5.00 in	5.1 to 7.3

This report provides a semitabular listing of some soil and site properties and interpretations that are valuable in communicating the concept of a map unit. The report also provides easy access to the commonly used conservation planning information in one place. The major soil components in each map unit are displayed. Minor components may be displayed if they are included in the database and are selected at the time the report is generated.