

Map Unit Description (MN)

Clay 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]

33B--Barnes loam, 1 to 3 percent slopes

Barnes

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 1 to 3 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 1

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loam	moderate	1.63 to 2.17 in	6.1 to 7.8
Bw1,Bw2 -- 9 to 18 in	loam	moderate	1.36 to 1.72 in	6.1 to 7.8
Bk1,Bk2,C -- 18 to 60 in	loam	moderate	5.84 to 7.93 in	7.4 to 8.4

33B2--Barnes loam, 2 to 6 percent slopes, eroded

Barnes, eroded

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 2 to 6 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loam	moderate	1.63 to 2.17 in	6.1 to 7.8
B1,B2 -- 9 to 18 in	loam	moderate	1.36 to 1.72 in	6.1 to 7.8
Bk1,Bk2,C -- 18 to 60 in	loam	moderate	5.84 to 7.93 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

33C2--Barnes loam, 6 to 12 percent slopes, eroded

Barnes, eroded

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 6 to 12 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loam	moderate	1.63 to 2.17 in	6.1 to 7.8
B1,B2 -- 9 to 18 in	loam	moderate	1.36 to 1.72 in	6.1 to 7.8
Bk1,Bk2,C -- 18 to 60 in	loam	moderate	5.84 to 7.93 in	7.4 to 8.4

36--Flom clay loam

Flom

Extent: 90 percent of the unit

Landform(s): swales on moraines

Slope gradient: 0 to 2 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .15

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,A1 -- 0 to 14 in	clay loam	moderately slow	2.55 to 3.40 in	6.1 to 7.8
Bg -- 14 to 23 in	silty clay loam	moderately slow	1.30 to 1.65 in	6.6 to 8.4
Bkg,C -- 23 to 60 in	loam	moderately slow	5.18 to 7.03 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

38B--Waukon fine sandy loam, 1 to 6 percent slopes

Waukon

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 1 to 6 percent

Parent material: loamy glacial 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>
Ap -- 0 to 10 in	fine sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bt -- 10 to 34 in	fine sandy loam	moderate	3.60 to 4.56 in	6.1 to 8.4
Bk,C -- 34 to 60 in	fine sandy loam	moderate	3.90 to 4.94 in	7.4 to 8.4

38B2--Waukon loam, 2 to 6 percent slopes, eroded

Waukon, eroded

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 2 to 6 percent

Parent material: loamy glacial 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): 5

Wind erodibility index (WEI): 56

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>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.89 in	6.1 to 7.3
Bt -- 8 to 21 in	sandy clay loam	moderate	1.95 to 2.47 in	6.1 to 8.4
Bk,C -- 21 to 60 in	fine sandy loam	moderate	5.85 to 7.41 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

38C--Waukon fine sandy loam, 6 to 12 percent slopes

Waukon

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 6 to 12 percent

Parent material: loamy glacial 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>
Ap -- 0 to 10 in	fine sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bt -- 10 to 34 in	sandy clay loam	moderate	3.60 to 4.56 in	6.1 to 8.4
Bk,C -- 34 to 60 in	loam	moderate	3.90 to 4.94 in	7.4 to 8.4

38C2--Waukon loam, 6 to 12 percent slopes, eroded

Waukon, eroded

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 6 to 12 percent

Parent material: loamy glacial 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): 5

Wind erodibility index (WEI): 56

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>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.89 in	6.1 to 7.3
Bt -- 8 to 21 in	sandy clay loam	moderate	1.95 to 2.47 in	6.1 to 8.4
Bk,C -- 21 to 60 in	loam	moderate	5.85 to 7.41 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

38D--Waukon fine sandy loam, 12 to 18 percent slopes

Waukon

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 18 percent

Parent material: loamy glacial 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>
Ap -- 0 to 10 in	fine sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bt -- 10 to 34 in	sandy clay loam	moderate	3.60 to 4.56 in	6.1 to 8.4
Bk,C -- 34 to 60 in	loam	moderate	3.90 to 4.94 in	7.4 to 8.4

38D2--Waukon loam, 12 to 18 percent slopes, eroded

Waukon, eroded

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 18 percent

Parent material: loamy glacial 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): 5

Wind erodibility index (WEI): 56

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>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.89 in	6.1 to 7.3
Bt -- 8 to 21 in	sandy clay loam	moderate	1.95 to 2.47 in	6.1 to 8.4
Bk,C -- 21 to 60 in	loam	moderate	5.85 to 7.41 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

38E--Waukon fine sandy loam, 18 to 30 percent slopes

Waukon

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 18 to 30 percent

Parent material: loamy glacial 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 7e

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 10 in	fine sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bt -- 10 to 34 in	sandy clay loam	moderate	3.60 to 4.56 in	6.1 to 8.4
Bk,C -- 34 to 60 in	loam	moderate	3.90 to 4.94 in	7.4 to 8.4

45B--Maddock fine sand, 0 to 4 percent slopes

Maddock

Extent: 90 percent of the unit

Landform(s): hillslopes on lake plains, hillslopes on moraines

Slope gradient: 0 to 4 percent

Parent material: eolian and lacustrine sands

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): 1

Wind erodibility index (WEI): 250

Kw factor (surface layer) .02

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,B1 -- 0 to 16 in	fine sand	rapid	1.61 to 1.94 in	6.6 to 7.8
B2,C -- 16 to 60 in	fine sand	rapid	2.19 to 5.24 in	6.6 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

45C--Maddock fine sand, 4 to 12 percent slopes

Maddock

Extent: 90 percent of the unit

Landform(s): hillslopes on lake plains, hillslopes on moraines

Slope gradient: 4 to 12 percent

Parent material: eolian and lacustrine sands

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): 1

Wind erodibility index (WEI): 250

Kw factor (surface layer) .02

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,B1 -- 0 to 16 in	fine sand	rapid	1.61 to 1.94 in	6.6 to 7.8
B2,C -- 16 to 60 in	fine sand	rapid	2.19 to 5.24 in	6.6 to 8.4

46--Borup loam

Borup

Extent: 90 percent of the unit

Landform(s): flats on lake plains, swales on lake plains

Slope gradient: 0 to 2 percent

Parent material: loamy over sandy 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): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .37

Land capability, nonirrigated 2w

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>
Ap -- 0 to 9 in	loam	moderately rapid	1.81 to 2.08 in	7.4 to 8.4
Bkg -- 9 to 18 in	very fine sandy loam	moderately rapid	1.54 to 1.81 in	7.4 to 8.4
C1,C2,C3,C4 -- 18 to 60 in	loamy very fine sand	rapid	6.26 to 7.93 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

47--Colvin silty clay loam

Colvin

Extent: 90 percent of the unit

Landform(s): flats on lake plains, swales on lake plains

Slope gradient: 0 to 1 percent

Parent material: silty lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 11 in	silty clay loam	moderately slow	1.98 to 2.54 in	6.6 to 8.4
Bkg1,Bkg2 -- 11 to 23 in	silt loam	moderate	1.89 to 2.60 in	7.4 to 8.4
Cg1,Cg2 -- 23 to 60 in	silty clay loam	moderate	5.92 to 8.14 in	7.4 to 8.4

50--Cashel silty clay

Cashel, occasionally flooded

Extent: 90 percent of the unit

Landform(s): flats on flood plains

Slope gradient: 0 to 3 percent

Parent material: alluvium on floodplains

Restrictive feature(s): greater than 60 inches

Flooding: occasional

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 2e

Hydric soil: no

Hydrologic group: C

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1,A2 -- 0 to 17 in	silty clay	moderately slow	2.54 to 3.05 in	7.4 to 8.4
C1g,C2,A1b,C -- 17 to 60 in	silty clay	moderately slow	5.58 to 7.30 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

52--Augsburg silt loam

Augsburg

Extent: 90 percent of the unit

Landform(s): flats on lake plains, swales on lake plains

Slope gradient: 0 to 1 percent

Parent material: loamy deposits over silty and clayey lacustrine sediments

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .37

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 10 in		silt loam	moderate	1.97 to 2.26 in	7.4 to 8.4
Bkg1,Bkg2 --	10 to 18 in		silt loam	moderately rapid	1.65 to 1.90 in	7.4 to 8.4
Cg --	18 to 31 in		very fine sandy loam	moderately rapid	2.21 to 2.86 in	7.4 to 8.4
2C1g,2Cg2 --	31 to 60 in		silty clay	slow	2.87 to 4.02 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

56--Fargo silty clay loam

Fargo

Extent: 90 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 1 percent

Parent material: clayey lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	silty clay loam	slow	1.63 to 2.08 in	6.6 to 7.8
Bg -- 9 to 24 in	silty clay	slow	2.09 to 2.54 in	6.6 to 8.4
Bkg,Cg -- 24 to 60 in	silty clay	slow	5.02 to 6.09 in	7.9 to 8.4

57A--Fargo silty clay, 0 to 2 percent slopes

Fargo

Extent: 90 percent of the unit

Landform(s): flats on lake plains, swales on lake plains

Slope gradient: 1 to 2 percent

Parent material: clayey lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .17

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	silty clay	slow	1.77 to 2.13 in	6.6 to 7.8
Bg -- 12 to 24 in	silty clay	slow	1.71 to 2.07 in	6.6 to 8.4
Bkg,Cg -- 24 to 60 in	silty clay	slow	5.02 to 6.09 in	7.9 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

57B--Fargo silty clay, 2 to 6 percent slopes

Fargo

Extent: 90 percent of the unit

Landform(s): swales on lake plains

Slope gradient: 2 to 6 percent

Parent material: clayey lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .17

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	silty clay	slow	1.77 to 2.13 in	6.6 to 7.8
Bg -- 12 to 24 in	silty clay	slow	1.71 to 2.07 in	6.6 to 8.4
Bkg,Cg -- 24 to 60 in	silty clay	slow	5.02 to 6.09 in	7.9 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

58A--Kittson fine sandy loam, 0 to 2 percent slopes

Kittson

Extent: 90 percent of the unit

Landform(s): flats, rises on till-floored lake plains

Slope gradient: 0 to 2 percent

Parent material: glaciolacustrine deposits over loamy glacial 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) .15

Land capability, nonirrigated 1

Hydric soil: no

Hydrologic group: C

Potential for frost action: high

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A --	0 to 10 in	fine sandy loam	moderately rapid	1.48 to 1.77 in	6.6 to 7.8
Bw --	10 to 17 in	fine sandy loam	moderate	1.20 to 1.35 in	6.6 to 7.8
Bk --	17 to 36 in	loam	moderate	2.83 to 3.40 in	7.4 to 8.4
C1,C2 --	36 to 60 in	loam	moderate	3.60 to 4.32 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

58B--Kittson loam, 1 to 5 percent slopes

Kittson

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines, hillslopes on till-floored lake plains

Slope gradient: 1 to 5 percent

Parent material: glaciolacustrine deposits over loamy glacial 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): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .20

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>
A -- 0 to 10 in	loam	moderate	1.97 to 2.17 in	6.6 to 7.8
Bw -- 10 to 17 in	fine sandy loam	moderate	1.20 to 1.35 in	6.6 to 7.8
Bk -- 17 to 36 in	loam	moderate	2.83 to 3.40 in	7.4 to 8.4
C1,C2 -- 36 to 60 in	loam	moderate	3.60 to 4.32 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

59--Grimstad fine sandy loam

Grimstad

Extent: 90 percent of the unit
Landform(s): flats on till-floored lake plains, rises on till-floored lake plains
Slope gradient: 0 to 3 percent
Parent material: sandy lacustrine deposits over loamy glacial till
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .10
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>
A1,A2 --	0 to 15 in	fine sandy loam	moderately rapid	1.94 to 2.69 in	7.4 to 8.4
Bk,C1,C2 --	15 to 23 in	loamy fine sand	rapid	0.63 to 1.10 in	7.4 to 9.0
2C3 --	23 to 60 in	loam	moderate	4.07 to 7.03 in	7.4 to 9.0

60A--Glyndon loam, 0 to 2 percent slopes

Glyndon

Extent: 90 percent of the unit
Landform(s): flats on lake plains, rises on lake plains
Slope gradient: 0 to 2 percent
Parent material: silty lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated 2s
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>
A1,A2k --	0 to 13 in	loam	moderate	2.60 to 2.99 in	7.4 to 9.0
Bk,C1 --	13 to 31 in	loam	moderately rapid	3.08 to 3.62 in	7.4 to 9.0
C2,C3,C4 --	31 to 60 in	loamy very fine sand	moderately rapid	4.31 to 5.46 in	7.4 to 9.0

Map Unit Description (MN)

Clay County, Minnesota

60B2--Glyndon loam, 2 to 6 percent slopes, eroded

Glyndon, eroded

Extent: 90 percent of the unit

Landform(s): rises on lake plains, hillslopes on lake plains

Slope gradient: 2 to 6 percent

Parent material: silty lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

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>
A1,A2k -- 0 to 10 in	loam	moderate	1.97 to 2.26 in	7.4 to 9.0
Bk,C1 -- 10 to 25 in	very fine sandy loam	moderately rapid	2.61 to 3.07 in	7.4 to 9.0
C2,C3,C4 -- 25 to 60 in	very fine sand	moderately rapid	5.20 to 6.58 in	7.4 to 9.0

61--Arveson clay loam

Arveson

Extent: 90 percent of the unit

Landform(s): flats on lake plains, swales on lake plains

Slope gradient: 0 to 2 percent

Parent material: loamy mantle over sandy glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .15

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>
A1,A2k -- 0 to 14 in	clay loam	moderate	2.27 to 2.55 in	7.4 to 8.4
Bkg1,Bkg2 -- 14 to 34 in	loam	moderately rapid	2.95 to 3.35 in	7.4 to 8.4
Cg1,Cg2 -- 34 to 60 in	loamy sand	rapid	1.30 to 3.90 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

63--Rockwell clay loam

Rockwell

Extent: 90 percent of the unit

Landform(s): flats on till-floored lake plains, swales on till-floored lake plains

Slope gradient: 0 to 1 percent

Parent material: glaciolacustrine deposits over loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .15

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>
A --	0 to 9 in	clay loam		moderate	1.63 to 1.99 in	7.4 to 8.4
Bk1,Bk2 --	9 to 18 in	fine sandy loam		moderately rapid	1.36 to 1.54 in	7.9 to 8.4
Cg1,Cg2 --	18 to 28 in	fine sand		rapid	0.49 to 0.69 in	7.4 to 7.8
2Cg3 --	28 to 60 in	silt loam		moderate	5.74 to 7.02 in	7.4 to 7.8

Map Unit Description (MN)

Clay County, Minnesota

64--Ulen fine sandy loam

Ulen

Extent: 90 percent of the unit

Landform(s): rises on lake plains

Slope gradient: 0 to 3 percent

Parent material: sandy lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 3s

Hydric soil: no

Hydrologic group: 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,Ak -- 0 to 13 in	fine sandy loam	moderately rapid	1.69 to 2.34 in	7.4 to 8.4
Bk1,Bk2 -- 13 to 25 in	fine sand	rapid	0.73 to 1.22 in	7.9 to 8.4
C1,C2,C3 -- 25 to 60 in	fine sand	rapid	2.08 to 2.77 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

65--Foxhome fine sandy loam

Foxhome

Extent: 90 percent of the unit

Landform(s): ridges on lake plains

Slope gradient: 0 to 1 percent

Parent material: stratified outwash deposits over loamy glacial 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) .10

Land capability, nonirrigated 3s

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>
A -- 0 to 10 in	fine sandy loam	moderately rapid	1.28 to 1.77 in	6.6 to 7.8
Bw1,Bw2 -- 10 to 18 in	loamy sand	rapid	0.74 to 1.57 in	6.6 to 7.8
2C1 -- 18 to 27 in	very gravelly loamy sand	rapid	0.17 to 0.61 in	7.4 to 8.4
3C2,3C3 -- 27 to 60 in	loam	moderate	4.96 to 7.28 in	7.4 to 8.4

66--Flaming fine sand

Flaming

Extent: 90 percent of the unit

Landform(s): rises on alluvial fans on lake plains

Slope gradient: 0 to 3 percent

Parent material: sandy eolian and outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 250

Kw factor (surface layer) .02

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>
A -- 0 to 13 in	fine sand	rapid	0.91 to 1.17 in	5.6 to 7.3
Bw,Cg -- 13 to 60 in	fine sand	rapid	2.81 to 4.69 in	5.6 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

67A--Bearden silt loam, 0 to 2 percent slopes

Bearden

Extent: 90 percent of the unit

Landform(s): rises on lake plains, flats on lake plains

Slope gradient: 0 to 2 percent

Parent material: silty lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .43

Land capability, nonirrigated 2s

Hydric soil: no

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	silt loam	moderate	1.81 to 2.17 in	7.4 to 8.4
Bk1,Bk2 -- 9 to 31 in	silt loam	moderately slow	3.53 to 4.85 in	7.4 to 8.4
Cg1,Cg2,Cg3 - 31 to 60 in	silt loam	moderately slow	4.60 to 6.32 in	7.4 to 8.4

67B2--Bearden silt loam, 2 to 6 percent slopes, eroded

Bearden, eroded

Extent: 90 percent of the unit

Landform(s): hillslopes on lake plains

Slope gradient: 2 to 6 percent

Parent material: silty lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .43

Land capability, nonirrigated 2e

Hydric soil: no

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	silt loam	moderate	1.81 to 2.17 in	7.4 to 8.4
Bk1,Bk2 -- 9 to 31 in	silt loam	moderately slow	3.53 to 4.85 in	7.4 to 8.4
Cg1,Cg2,Cg3 - 31 to 60 in	silt loam	moderately slow	4.60 to 6.32 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

68--Arveson clay loam, depressional

Arveson, depressional

Extent: 90 percent of the unit

Landform(s): depressions on lake plains

Slope gradient: 0 to 1 percent

Parent material: loamy mantle over sandy glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .15

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>
A1,A2k -- 0 to 14 in	clay loam	moderate	2.27 to 2.55 in	7.4 to 8.4
Bkg1,Bkg2 -- 14 to 34 in	loam	moderately rapid	2.95 to 3.35 in	7.4 to 8.4
Cg1,Cg2 -- 34 to 60 in	sandy loam	rapid	1.30 to 3.90 in	7.4 to 8.4

71--Fossum loamy sand

Fossum

Extent: 90 percent of the unit

Landform(s): swales on lake plains

Slope gradient: 0 to 2 percent

Parent material: sandy glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

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) .02

Land capability, nonirrigated 4w

Hydric soil: yes

Hydrologic group: A/D

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A,Bkg -- 0 to 18 in	loamy sand	rapid	1.81 to 2.17 in	7.4 to 8.4
Cg -- 18 to 60 in	fine sand	rapid	2.09 to 3.76 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

93--Bearden silty clay loam

Bearden

Extent: 90 percent of the unit

Landform(s): rises on lake plains

Slope gradient: 0 to 2 percent

Parent material: silty lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Land capability, nonirrigated 2s

Hydric soil: no

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	silty clay loam	moderately slow	2.01 to 2.72 in	7.4 to 8.4
Bk1,Bk2 -- 12 to 31 in	silty clay loam	moderately slow	3.09 to 4.24 in	7.4 to 8.4
Cg1,Cg2,Cg3 - 31 to 60 in	silt loam	moderately slow	4.60 to 6.32 in	7.4 to 8.4

127B--Sverdrup sandy loam, 1 to 4 percent slopes

Sverdrup

Extent: 90 percent of the unit

Landform(s): hillslopes on outwash plains

Slope gradient: 1 to 4 percent

Parent material: loamy over sandy outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw1,Bw2 -- 9 to 21 in	sandy loam	moderately rapid	0.94 to 1.65 in	6.1 to 7.8
Bk,C -- 21 to 60 in	fine sand	rapid	0.78 to 2.34 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

127C--Sverdrup sandy loam, 4 to 12 percent slopes

Sverdrup

Extent: 90 percent of the unit

Landform(s): hillslopes on outwash plains

Slope gradient: 4 to 12 percent

Parent material: loamy over sandy outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 4e

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 9 in	sandy loam	moderately rapid	1.18 to 1.36 in	6.1 to 7.3
Bw1,Bw2 -- 9 to 21 in	sandy loam	moderately rapid	0.94 to 1.65 in	6.1 to 7.8
Bk,C -- 21 to 60 in	fine sand	rapid	0.78 to 2.34 in	7.4 to 8.4

148--Poppleton fine sand

Poppleton

Extent: 90 percent of the unit

Landform(s): rises on alluvial fans on lake plains

Slope gradient: 0 to 2 percent

Parent material: sandy glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 1

Wind erodibility index (WEI): 250

Kw factor (surface layer) .02

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	fine sand	rapid	0.63 to 0.79 in	5.6 to 7.3
Bw,Cg -- 8 to 60 in	fine sand	rapid	3.64 to 4.68 in	6.1 to 7.8

Map Unit Description (MN)

Clay County, Minnesota

157A--Wahpeton silty clay, 0 to 2 percent slopes

Wahpeton, occasionally flooded

Extent: 90 percent of the unit

Landform(s): hillslopes on lake plains

Slope gradient: 0 to 2 percent

Parent material: clayey river terrace alluvium

Restrictive feature(s): greater than 60 inches

Flooding: occasional

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 2s

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>
A,Bg -- 0 to 34 in	silty clay	moderate	4.74 to 6.09 in	6.1 to 7.8
2AB,2Cg -- 34 to 60 in	silty clay	moderate	3.38 to 4.42 in	6.6 to 8.4

157B--Wahpeton silty clay, 2 to 6 percent slopes

Wahpeton, occasionally flooded

Extent: 90 percent of the unit

Landform(s): hillslopes on lake plains

Slope gradient: 2 to 6 percent

Parent material: clayey river terrace alluvium

Restrictive feature(s): greater than 60 inches

Flooding: occasional

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

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>
A,Bg -- 0 to 34 in	silty clay	moderate	4.74 to 6.09 in	6.1 to 7.8
2AB,2Cg -- 34 to 60 in	silty clay	moderate	3.38 to 4.42 in	6.6 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

157C--Wahpeton silty clay, 6 to 12 percent slopes

Wahpeton, occasionally flooded

Extent: 90 percent of the unit

Landform(s): hillslopes on lake plains

Slope gradient: 6 to 12 percent

Parent material: clayey river terrace alluvium

Restrictive feature(s): greater than 60 inches

Flooding: occasional

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 4e

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>
A,Bg -- 0 to 34 in	silty clay	moderate	4.74 to 6.09 in	6.1 to 7.8
2AB,2Cg -- 34 to 60 in	silty clay	moderate	3.38 to 4.42 in	6.6 to 8.4

180B--Gonvick clay loam, 1 to 4 percent slopes

Gonvick

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 1 to 4 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .24

Land capability, nonirrigated 1

Hydric soil: no

Hydrologic group: C

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 11 in	clay loam	moderate	2.20 to 2.43 in	6.1 to 7.3
Bt,Bw -- 11 to 22 in	clay loam	moderate	1.65 to 2.09 in	6.6 to 7.3
Bk,Cg -- 22 to 60 in	loam	moderate	5.67 to 7.18 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

184B--Hamerly loam, 1 to 4 percent slopes

Hamerly

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines, rises on till-floored lake plains

Slope gradient: 1 to 4 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated 2s

Hydric soil: no

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 10 in	loam	moderate	1.77 to 2.36 in	6.6 to 8.4
Bk1,Bk2 -- 10 to 30 in	loam	moderate	3.01 to 3.81 in	7.4 to 8.4
Cg -- 30 to 60 in	loam	moderately slow	4.19 to 5.69 in	7.4 to 8.4

236--Vallers loam

Vallers

Extent: 90 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 2 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A,Ak -- 0 to 13 in	loam	moderate	2.86 to 3.12 in	7.4 to 8.4
Bkg1,Bkg2 -- 13 to 26 in	clay loam	moderately slow	1.95 to 2.47 in	7.4 to 8.4
Cg -- 26 to 60 in	loam	moderately slow	5.76 to 6.43 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

245B--Lohnes coarse sandy loam, 1 to 6 percent slopes

Lohnes

Extent: 90 percent of the unit

Landform(s): ridges on lake plains, hillslopes on moraines

Slope gradient: 1 to 6 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .10

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 9 in	coarse sandy loam	rapid	0.91 to 1.18 in	6.6 to 7.8
Bw,C1,C2 -- 9 to 60 in	coarse sand	rapid	1.52 to 3.56 in	7.4 to 8.4

293B--Swenoda sandy loam, 1 to 4 percent slopes

Swenoda

Extent: 90 percent of the unit

Landform(s): hillslopes on till-floored lake plains

Slope gradient: 1 to 4 percent

Parent material: loamy glaciolacustrine deposits over lake washed 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) .05

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 13 in	sandy loam	moderately rapid	1.43 to 2.21 in	6.1 to 7.3
Bw1,Bw2 -- 13 to 32 in	sandy loam	moderately rapid	2.08 to 3.21 in	6.6 to 7.8
2C -- 32 to 60 in	loam	moderate	4.75 to 5.59 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

335--Urness mucky silt loam

Urness

Extent: 90 percent of the unit

Landform(s): swales, depressions on moraines, lakebeds on moraines

Slope gradient: 0 to 1 percent

Parent material: limnic coprogenous earth

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .02

Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 10 in	mucky silt loam	moderate	1.77 to 2.36 in	7.4 to 8.4
C1,C2,C3 -- 10 to 60 in	mucky silt loam	moderate	8.00 to 11.00 in	7.4 to 8.4

343A--Wheatville silt loam, 0 to 2 percent slopes

Wheatville

Extent: 90 percent of the unit

Landform(s): rises on lake plains

Slope gradient: 0 to 2 percent

Parent material: loamy over clayey lacustrine deposits

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): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .37

Land capability, nonirrigated 2s

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	silt loam	moderately rapid	1.63 to 1.99 in	7.4 to 8.4
Bk1,Bk2 -- 9 to 23 in	very fine sandy loam	moderately rapid	2.07 to 2.89 in	7.4 to 8.4
2Cg -- 23 to 60 in	silty clay	slow	3.70 to 5.18 in	7.4 to 7.8

Map Unit Description (MN)

Clay County, Minnesota

343B2--Wheatville loam, 2 to 6 percent slopes, eroded

Wheatville, eroded

<i>Extent:</i> 90 percent of the unit	<i>Soil loss tolerance (T factor):</i> 4
<i>Landform(s):</i> hillslopes on lake plains	<i>Wind erodibility group (WEG):</i> 4L
<i>Slope gradient:</i> 2 to 6 percent	<i>Wind erodibility index (WEI):</i> 86
<i>Parent material:</i> loamy over clayey lacustrine deposits	<i>Kw factor (surface layer)</i> .37
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 2e
<i>Flooding:</i> none	<i>Hydric soil:</i> no
<i>Ponding:</i> none	<i>Hydrologic group:</i> B
<i>Drainage class:</i> moderately well drained	<i>Potential for frost action:</i> high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 15 in	loam	moderately rapid	2.69 to 3.29 in	7.4 to 8.4
Bk1,Bk2 -- 15 to 23 in	very fine sandy loam	moderately rapid	1.18 to 1.65 in	7.4 to 8.4
2Cg -- 23 to 60 in	silty clay	slow	3.70 to 5.18 in	7.4 to 7.8

344--Quam clay loam

Quam

<i>Extent:</i> 90 percent of the unit	<i>Soil loss tolerance (T factor):</i> 5
<i>Landform(s):</i> depressions on moraines	<i>Wind erodibility group (WEG):</i> 6
<i>Slope gradient:</i> 0 to 1 percent	<i>Wind erodibility index (WEI):</i> 48
<i>Parent material:</i> local alluvium over loamy glacial till	<i>Kw factor (surface layer)</i> .32
<i>Restrictive feature(s):</i> greater than 60 inches	<i>Land capability, nonirrigated</i> 3w
<i>Flooding:</i> none	<i>Hydric soil:</i> yes
<i>Ponding:</i> frequent	<i>Hydrologic group:</i> C/D
<i>Drainage class:</i> very poorly drained	<i>Potential for frost action:</i> high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1 -- 0 to 12 in	clay loam	moderately slow	2.13 to 2.60 in	6.6 to 7.8
A2,A3,A4,A5 -- 12 to 60 in	clay loam	moderately slow	7.69 to 10.57 in	6.6 to 7.8
Ckg -- 60 to 65 in	clay loam	moderately slow	0.72 to 0.97 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

402B--Sioux sandy loam, 1 to 6 percent slopes

Sioux

Extent: 90 percent of the unit

Landform(s): ridges on beach ridges, hillslopes on beach ridges

Slope gradient: 1 to 6 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

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 9 in	sandy loam	moderately rapid	1.00 to 1.36 in	6.6 to 8.4
AC -- 9 to 14 in	gravelly loamy coarse sand	moderately rapid	0.51 to 0.77 in	7.4 to 8.4
C -- 14 to 60 in	very gravelly loamy coarse sand	very rapid	1.37 to 2.74 in	7.4 to 8.4

402C--Sioux sandy loam, 6 to 12 percent slopes

Sioux

Extent: 90 percent of the unit

Landform(s): hillslopes on beach ridges

Slope gradient: 6 to 12 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

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 9 in	sandy loam	moderately rapid	1.00 to 1.36 in	6.6 to 8.4
AC -- 9 to 14 in	gravelly loamy sand	moderately rapid	0.51 to 0.77 in	7.4 to 8.4
C -- 14 to 60 in	very gravelly loamy sand	very rapid	1.37 to 2.74 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

402D--Sioux loamy coarse sand, 12 to 18 percent slopes

Sioux

<p><i>Extent:</i> 90 percent of the unit</p> <p><i>Landform(s):</i> moraines, hillslopes on outwash plains, hillslopes on outwash plains</p> <p><i>Slope gradient:</i> 12 to 18 percent</p> <p><i>Parent material:</i> sandy and gravelly outwash deposits</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> excessively drained</p>	<p><i>Soil loss tolerance (T factor):</i> 3</p> <p><i>Wind erodibility group (WEG):</i> 2</p> <p><i>Wind erodibility index (WEI):</i> 134</p> <p><i>Kw factor (surface layer)</i> .05</p> <p><i>Land capability, nonirrigated</i> 6s</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> A</p> <p><i>Potential for frost action:</i> low</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 12 in	loamy coarse sand	moderately rapid	0.94 to 1.42 in	6.6 to 8.4
C -- 12 to 60 in	very gravelly loamy sand	very rapid	1.44 to 2.88 in	7.4 to 8.4

402E--Sioux bouldery loamy coarse sand, 12 to 30 percent slopes

Sioux

<p><i>Extent:</i> 90 percent of the unit</p> <p><i>Landform(s):</i> hillslopes on moraines</p> <p><i>Slope gradient:</i> 12 to 30 percent</p> <p><i>Parent material:</i> sandy and gravelly outwash deposits</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> excessively drained</p>	<p><i>Soil loss tolerance (T factor):</i> 5</p> <p><i>Wind erodibility group (WEG):</i> 2</p> <p><i>Wind erodibility index (WEI):</i> 134</p> <p><i>Kw factor (surface layer)</i> .02</p> <p><i>Land capability, nonirrigated</i> 7s</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> A</p> <p><i>Potential for frost action:</i> low</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 3 in	bouldery loamy coarse sand	rapid	0.22 to 0.38 in	6.6 to 8.4
AC -- 3 to 15 in	gravelly loamy sand	moderately rapid	0.94 to 1.42 in	6.6 to 8.4
C -- 15 to 60 in	very gravelly sand	very rapid	1.35 to 2.69 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

403--Viking sandy clay loam

Viking

Extent: 90 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 2 percent

Parent material: water-worked clayey glacial till

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): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .24

Land capability, nonirrigated 2w

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 12 in	sandy clay loam	moderate	2.13 to 2.36 in	6.6 to 7.8
Bg -- 12 to 21 in	clay	very slow	0.91 to 1.27 in	7.4 to 8.4
Bkg,Cg1,Cg2 - 21 to 60 in	clay	very slow	3.51 to 5.07 in	7.4 to 8.4
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Map Unit Description (MN)

Clay County, Minnesota

413--Osakis loam

Osakis

Extent: 90 percent of the unit

Landform(s): flats on outwash plains, rises on outwash plains

Slope gradient: 0 to 2 percent

Parent material: loamy over sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .24

Land capability, nonirrigated 3s

Hydric soil: no

Hydrologic group: C

Potential for frost action: moderate

Representative soil profile:

		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap --	0 to 8 in	loam	moderate	1.42 to 1.73 in	6.1 to 7.3
Bw --	8 to 17 in	sandy loam	moderately rapid	1.27 to 1.72 in	6.1 to 7.3
2Bk --	17 to 30 in	gravelly loamy sand	rapid	0.52 to 0.78 in	6.1 to 7.3
2C --	30 to 60 in	gravelly coarse sand	rapid	0.60 to 1.20 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

425--Donaldson fine sandy loam

Donaldson

Extent: 90 percent of the unit

Landform(s): rises on lake plains

Slope gradient: 0 to 2 percent

Parent material: loamy lacustrine over clayey lacustrine deposits or clayey glacial 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) .15

Land capability, nonirrigated 1

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	1.63 to 2.08 in	6.6 to 7.8
Bw1,Bw2 --	9 to 20 in	very fine sandy loam	moderately rapid	1.87 to 2.09 in	6.6 to 8.4
Bk1,Bk2 --	20 to 32 in	very fine sandy loam	moderately rapid	1.89 to 2.24 in	6.6 to 8.4
2Cg --	32 to 60 in	clay	slow	2.52 to 3.63 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

426--Foldahl loamy fine sand

Foldahl

Extent: 90 percent of the unit
Landform(s): rises on till-floored lake plains
Slope gradient: 0 to 2 percent
Parent material: sandy lacustrine deposits over loamy lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .10
Land capability, nonirrigated 3s
Hydric soil: no
Hydrologic group: A
Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 11 in	loamy fine sand	rapid	1.10 to 1.54 in	6.1 to 7.8
Bw1,Bw2,C1 -- 11 to 29 in	loamy fine sand	rapid	1.27 to 2.17 in	6.6 to 7.8
2Cg1,2Cg2 -- 29 to 60 in	loam	moderate	4.30 to 5.83 in	7.4 to 8.4

429--Northcote clay

Northcote

Extent: 90 percent of the unit
Landform(s): flats on lake plains
Slope gradient: 0 to 2 percent
Parent material: clayey lacustrine deposits
Restrictive feature(s): greater than 60 inches
Flooding: rare
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .15
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,A1,A2 -- 0 to 18 in	clay	slow	2.35 to 2.90 in	6.6 to 7.3
Bg1,Bg2 -- 18 to 35 in	clay	slow	1.69 to 2.37 in	6.6 to 7.8
Cg1,Cg2 -- 35 to 60 in	clay	slow	2.48 to 3.47 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

435--Syrene sandy clay loam

Syrene

Extent: 90 percent of the unit

Landform(s): flats on lake plains, swales on lake plains

Slope gradient: 0 to 2 percent

Parent material: loamy lacustrine deposits over sandy lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .05

Land capability, nonirrigated 4w

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 9 in	sandy clay loam	moderate	1.63 to 1.81 in	7.4 to 8.4
Bkg --	9 to 17 in	sandy clay loam	moderately rapid	1.18 to 1.50 in	7.9 to 8.4
2Bkg,2Cg --	17 to 60 in	stratified gravelly coarse sand to loamy fine sand	rapid	0.86 to 1.72 in	7.4 to 8.4

494--Darnen loam

Darnen

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 1 to 2 percent

Parent material: local alluvium over glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 1

Hydric soil: no

Hydrologic group: C

Potential for frost action: moderate

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A1,A2 --	0 to 25 in	loam	moderate	5.04 to 6.05 in	6.6 to 7.8
Bw1,Bw2 --	25 to 48 in	loam	moderate	3.43 to 4.34 in	6.1 to 7.8
C --	48 to 60 in	loam	moderate	1.65 to 2.24 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

506--Overly silty clay loam

Overly

<p><i>Extent:</i> 90 percent of the unit</p> <p><i>Landform(s):</i> rises on lake plains, flats on lake plains</p> <p><i>Slope gradient:</i> 0 to 3 percent</p> <p><i>Parent material:</i> silty and clayey lacustrine deposits</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> moderately well drained</p>	<p><i>Soil loss tolerance (T factor):</i> 5</p> <p><i>Wind erodibility group (WEG):</i> 6</p> <p><i>Wind erodibility index (WEI):</i> 48</p> <p><i>Kw factor (surface layer)</i> .32</p> <p><i>Land capability, nonirrigated</i> 1</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> C</p> <p><i>Potential for frost action:</i> high</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap,A -- 0 to 10 in	silty clay loam	moderately slow	1.67 to 2.26 in	6.6 to 7.8
Bw1,Bw2 -- 10 to 19 in	silty clay loam	moderately slow	1.54 to 1.99 in	6.6 to 8.4
Bk1,Bkg,Cg -- 19 to 60 in	stratified silt loam to silty clay	moderately slow	5.32 to 9.01 in	7.9 to 8.4

508--Wyndmere fine sandy loam

Wyndmere

<p><i>Extent:</i> 90 percent of the unit</p> <p><i>Landform(s):</i> rises on lake plains, flats on lake plains</p> <p><i>Slope gradient:</i> 0 to 3 percent</p> <p><i>Parent material:</i> loamy over sandy glaciolacustrine deposits</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> somewhat poorly drained</p>	<p><i>Soil loss tolerance (T factor):</i> 3</p> <p><i>Wind erodibility group (WEG):</i> 3</p> <p><i>Wind erodibility index (WEI):</i> 86</p> <p><i>Kw factor (surface layer)</i> .15</p> <p><i>Land capability, nonirrigated</i> 2s</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> A/D</p> <p><i>Potential for frost action:</i> high</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 10 in	fine sandy loam	moderately rapid	1.28 to 1.77 in	6.6 to 8.4
Ak,Bk1,Bk2 -- 10 to 29 in	fine sandy loam	moderately rapid	2.31 to 3.28 in	7.4 to 8.4
C1,C2g -- 29 to 60 in	fine sand	rapid	1.54 to 4.91 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

509--Vallers bouldery loam

Vallers, bouldery

Extent: 90 percent of the unit

Landform(s): flats on lake plains, swales on moraines

Slope gradient: 0 to 1 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 5w

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>
A,Ak -- 0 to 11 in	loam	moderate	2.43 to 2.65 in	7.4 to 8.4
Bkg1,Bkg2 -- 11 to 21 in	clay loam	moderately slow	1.48 to 1.87 in	7.9 to 8.4
Cg -- 21 to 60 in	loam	moderately slow	6.63 to 7.41 in	7.4 to 8.4

510--Elmville fine sandy loam

Elmville

Extent: 90 percent of the unit

Landform(s): flats on lake plains, rises on lake plains

Slope gradient: 0 to 3 percent

Parent material: loamy over clayey lacustrine deposits or glacial 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 2s

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,Ak -- 0 to 14 in	fine sandy loam	moderately rapid	2.27 to 3.12 in	7.4 to 8.4
Bk1,Bk2,C1 -- 14 to 30 in	very fine sandy loam	moderately rapid	1.89 to 2.68 in	7.4 to 8.4
2C2 -- 30 to 60 in	clay	slow	2.99 to 4.19 in	7.4 to 7.8

Map Unit Description (MN)

Clay County, Minnesota

540--Seelyeville muck

Seelyeville

Extent: 90 percent of the unit

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

Slope gradient: 0 to 1 percent

Parent material: highly decomposed herbaceous organic material

Restrictive feature(s): greater than 60 inches

Flooding: rare

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 -- 0 to 16 in	muck	moderately rapid	5.65 to 7.26 in	
Oa2,Oa3 -- 16 to 60 in	muck	moderately rapid	15.30 to 19.67 in	

Map Unit Description (MN)

Clay County, Minnesota

543--Markey muck

Markey

Extent: 90 percent of the unit

Landform(s): depressions on outwash plains

Slope gradient: 0 to 1 percent

Parent material: highly decomposed herbaceous organic deposits over outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

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>
Oa1,Oa2,Oa3 -	0 to 28 in muck	moderately rapid	9.78 to 12.58 in	
2Cg --	28 to 60 in fine sand	rapid	0.96 to 2.55 in	

544--Cathro muck

Cathro

Extent: 90 percent of the unit

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

Slope gradient: 0 to 1 percent

Parent material: highly decomposed herbaceous organic deposits over loamy deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 1

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .02

Land capability, nonirrigated 6w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Oa1,Oa2 --	0 to 21 in muck	moderately rapid	9.39 to 11.48 in	
2Cg1,2Cg2 --	21 to 60 in clay loam	moderate	4.29 to 7.41 in	

Map Unit Description (MN)

Clay County, Minnesota

545--Rondeau muck

Rondeau

Extent: 90 percent of the unit

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

Slope gradient: 0 to 1 percent

Parent material: herbaceous organic material over limnic sediments and marl

Restrictive feature(s): greater than 60 inches

Flooding: rare

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>
Oa1,Oe,Oa2 --	0 to 50 in muck	moderately rapid	17.50 to 24.00 in	
Cg --	50 to 60 in marl	moderate	1.97 to 2.17 in	

609--Dickey loamy fine sand

Dickey

Extent: 90 percent of the unit

Landform(s): rises, lake plains

Slope gradient: 0 to 2 percent

Parent material: sandy lacustrine deposits over glacial till or lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .10

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 10 in loamy fine sand	rapid	0.79 to 1.18 in	6.1 to 7.8
Bw1,Bw2 --	10 to 26 in loamy sand	rapid	0.97 to 1.94 in	6.1 to 7.8
2Bw3,2C --	26 to 60 in silty clay loam	moderate	4.74 to 6.43 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

841--Urban land-Fargo complex

Urban land

Extent: 70 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 1 percent

Parent material: clayey lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated

Hydric soil: unranked

Hydrologic group:

Potential for frost action:

Representative soil profile:

Texture

Permeability

*Available water
capacity*

pH

Map Unit Description (MN)

Clay County, Minnesota

892B--Sioux-Sverdrup complex, 1 to 6 percent slopes

Sioux

Extent: 50 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 1 to 6 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .10

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 10 in	sandy loam	moderately rapid	1.08 to 1.48 in	6.6 to 8.4
AC -- 10 to 26 in	gravelly loamy sand	moderately rapid	1.61 to 2.42 in	7.4 to 8.4
C -- 26 to 60 in	very gravelly loamy sand	very rapid	1.02 to 2.03 in	7.4 to 8.4

Sverdrup

Extent: 35 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 1 to 6 percent

Parent material: loamy over sandy outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 3e

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 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bw -- 10 to 15 in	sandy loam	moderately rapid	0.41 to 0.72 in	6.1 to 7.8
Bk,C -- 15 to 60 in	fine sand	rapid	0.90 to 2.69 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

892C--Sioux-Sverdrup complex, 6 to 18 percent slopes

Sioux

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 6 to 18 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

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 8 in	sandy loam	moderately rapid	0.87 to 1.18 in	6.6 to 8.4
AC -- 8 to 12 in	gravelly loamy sand	moderately rapid	0.39 to 0.59 in	7.4 to 8.4
C -- 12 to 60 in	very gravelly loamy sand	very rapid	1.44 to 2.88 in	7.4 to 8.4

Sverdrup

Extent: 30 percent of the unit

Landform(s): moraines, -- error in exists on --

Slope gradient: 6 to 18 percent

Parent material: loamy over sandy outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated 6e

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bw -- 10 to 15 in	sandy loam	moderately rapid	0.41 to 0.72 in	6.1 to 7.8
Bk,C -- 15 to 60 in	fine sand	rapid	0.90 to 2.69 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

893E--Lohnes-Waukon complex, 12 to 30 percent slopes

Lohnes

Extent: 60 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 15 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .10

Land capability, nonirrigated 6e

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 10 in	coarse sandy loam	rapid	0.98 to 1.28 in	6.6 to 7.8
AC,C -- 10 to 60 in	coarse sand	rapid	1.50 to 3.50 in	7.4 to 8.4

Waukon

Extent: 25 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 30 percent

Parent material: loamy glacial 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) .15

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 7 in	sandy loam	moderately rapid	0.92 to 1.06 in	6.1 to 7.3
Bt -- 7 to 19 in	clay loam	moderate	1.83 to 2.32 in	6.1 to 8.4
Bk,C -- 19 to 60 in	loam	moderate	6.08 to 7.70 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

903B--Barnes-Langhei loams, 1 to 6 percent slopes

Barnes

Extent: 60 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 1 to 6 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 9 in	loam	moderate	1.63 to 2.17 in	6.1 to 7.8
Bw1 -- 9 to 15 in	loam	moderate	0.89 to 1.12 in	6.1 to 7.8
Bk,C -- 15 to 60 in	loam	moderate	6.28 to 8.53 in	7.4 to 8.4

Langhei

Extent: 30 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 2 to 6 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Apk -- 0 to 8 in	loam	moderate	1.34 to 1.73 in	6.6 to 8.4
Bk,C -- 8 to 60 in	loam	moderate	7.80 to 9.87 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

908--Bearden-Fargo complex

Bearden

<p><i>Extent:</i> 55 percent of the unit</p> <p><i>Landform(s):</i> ridges on lake plains, flats on lake plains</p> <p><i>Slope gradient:</i> 0 to 2 percent</p> <p><i>Parent material:</i> silty lacustrine deposits</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> none</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> somewhat poorly drained</p>	<p><i>Soil loss tolerance (T factor):</i> 5</p> <p><i>Wind erodibility group (WEG):</i> 4L</p> <p><i>Wind erodibility index (WEI):</i> 86</p> <p><i>Kw factor (surface layer)</i> .32</p> <p><i>Land capability, nonirrigated</i> 2s</p> <p><i>Hydric soil:</i> no</p> <p><i>Hydrologic group:</i> C/D</p> <p><i>Potential for frost action:</i> high</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	silty clay loam	moderately slow	2.01 to 2.72 in	7.4 to 8.4
Bk1 -- 12 to 31 in	silty clay loam	moderately slow	3.09 to 4.24 in	7.4 to 8.4
Bk2 -- 31 to 44 in	silt loam	moderately slow	2.08 to 2.86 in	7.4 to 8.4
Cg -- 44 to 60 in	silt loam	slow	2.52 to 3.46 in	7.4 to 8.4

Fargo

<p><i>Extent:</i> 35 percent of the unit</p> <p><i>Landform(s):</i> flats on lake plains, swales on lake plains</p> <p><i>Slope gradient:</i> 0 to 1 percent</p> <p><i>Parent material:</i> clayey lacustrine deposits</p> <p><i>Restrictive feature(s):</i> greater than 60 inches</p> <p><i>Flooding:</i> rare</p> <p><i>Ponding:</i> none</p> <p><i>Drainage class:</i> poorly drained</p>	<p><i>Soil loss tolerance (T factor):</i> 5</p> <p><i>Wind erodibility group (WEG):</i> 4</p> <p><i>Wind erodibility index (WEI):</i> 86</p> <p><i>Kw factor (surface layer)</i> .17</p> <p><i>Land capability, nonirrigated</i> 2w</p> <p><i>Hydric soil:</i> yes</p> <p><i>Hydrologic group:</i> C/D</p> <p><i>Potential for frost action:</i> high</p>
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<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	silty clay	slow	1.77 to 2.13 in	6.6 to 7.3
A,Bg1 -- 12 to 24 in	silty clay	slow	1.71 to 2.07 in	6.6 to 8.4
Bg2 -- 24 to 39 in	silty clay	slow	2.09 to 2.54 in	7.9 to 8.4
Bkg,Cg -- 39 to 60 in	silty clay loam	moderate	3.13 to 4.17 in	7.9 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

935--Hegne-Fargo silty clays

Hegne

Extent: 55 percent of the unit

Landform(s): rises on lake plains, ridges on lake plains

Slope gradient: 0 to 2 percent

Parent material: clayey 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): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/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	silty clay	slow	1.27 to 1.54 in	7.4 to 8.4
Bkg1,Bkg2 -- 9 to 27 in	silty clay	slow	2.30 to 2.83 in	7.4 to 8.4
Bkg3 -- 27 to 34 in	silty clay	slow	0.64 to 1.13 in	7.4 to 8.4
Cg -- 34 to 60 in	clay	slow	2.08 to 3.64 in	7.4 to 8.4

Fargo

Extent: 40 percent of the unit

Landform(s): flats on lake plains, swales on lake plains

Slope gradient: 0 to 2 percent

Parent material: clayey lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .17

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	silty clay	slow	1.77 to 2.13 in	6.6 to 7.8
Bkg -- 12 to 24 in	silty clay	slow	1.71 to 2.07 in	6.6 to 8.4
Cg -- 24 to 60 in	silty clay	slow	5.02 to 6.09 in	7.9 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

942C2--Langhei-Barnes loams, 6 to 12 percent slopes, eroded

Langhei, eroded

Extent: 60 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 6 to 12 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Apk -- 0 to 8 in	loam	moderate	1.34 to 1.73 in	6.6 to 8.4
Bk -- 8 to 17 in	loam	moderate	1.36 to 1.72 in	7.9 to 8.4
C -- 17 to 60 in	loam	moderate	6.44 to 8.15 in	7.4 to 8.4

Barnes, eroded

Extent: 30 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 6 to 12 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.42 to 1.89 in	6.1 to 7.8
Bw -- 8 to 14 in	loam	moderate	0.94 to 1.20 in	6.1 to 7.8
Bk,C -- 14 to 60 in	loam	moderate	6.39 to 8.68 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

942D2--Langhei-Barnes loams, 12 to 18 percent slopes, eroded

Langhei, eroded

Extent: 65 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 18 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Land capability, nonirrigated 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Apk -- 0 to 8 in	loam	moderate	1.34 to 1.73 in	6.6 to 8.4
Bk,C -- 8 to 60 in	loam	moderate	7.80 to 9.87 in	7.4 to 8.4

Barnes, eroded

Extent: 25 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 18 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .28

Land capability, nonirrigated 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.42 to 1.89 in	6.1 to 7.8
Bw -- 8 to 14 in	loam	moderate	0.94 to 1.20 in	6.1 to 7.8
Bk,C -- 14 to 60 in	loam	moderate	6.39 to 8.68 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

966C--Waukon-Sioux sandy loams, 4 to 12 percent slopes

Waukon

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 4 to 12 percent

Parent material: loamy glacial 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) .15

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 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bt -- 10 to 20 in	clay loam	moderate	1.54 to 1.94 in	6.1 to 8.4
Bk,C -- 20 to 60 in	loam	moderate	5.96 to 7.56 in	7.4 to 8.4

Sioux

Extent: 35 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 4 to 12 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

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>
Ap -- 0 to 8 in	sandy loam	moderately rapid	0.87 to 1.18 in	6.6 to 8.4
AC -- 8 to 11 in	gravelly loamy sand	moderately rapid	0.31 to 0.47 in	7.4 to 8.4
C -- 11 to 60 in	very gravelly sand	very rapid	1.46 to 2.93 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

966D--Waukon-Sioux sandy loams, 12 to 18 percent slopes

Waukon

Extent: 55 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 18 percent

Parent material: loamy glacial 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) .15

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 10 in	sandy loam	moderately rapid	1.28 to 1.48 in	6.1 to 7.3
Bt -- 10 to 20 in	clay loam	moderate	1.54 to 1.94 in	6.1 to 8.4
Bk,C -- 20 to 60 in	loam	moderate	5.96 to 7.56 in	7.4 to 8.4

Sioux

Extent: 35 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 18 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

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 8 in	sandy loam	moderately rapid	0.87 to 1.18 in	6.6 to 8.4
AC -- 8 to 11 in	gravelly loamy sand	moderately rapid	0.31 to 0.47 in	7.4 to 8.4
C -- 11 to 60 in	very gravelly sand	very rapid	1.46 to 2.93 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

967B2--Waukon-Langhei loams, 1 to 6 percent slopes, eroded

Waukon, eroded

Extent: 60 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 1 to 6 percent

Parent material: loamy glacial 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): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated 2e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.89 in	6.1 to 7.3
Bt -- 8 to 21 in	fine sandy loam	moderate	1.95 to 2.47 in	6.1 to 8.4
Bk,C -- 21 to 60 in	loam	moderate	5.85 to 7.41 in	7.4 to 8.4

Langhei, eroded

Extent: 30 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 2 to 6 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Apk -- 0 to 7 in	loam	moderate	1.20 to 1.56 in	6.6 to 8.4
Bk,C -- 7 to 60 in	loam	moderate	7.91 to 10.02 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

979C2--Langhei-Waukon loams, 6 to 12 percent slopes, eroded

Langhei, eroded

Extent: 60 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 6 to 12 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Apk -- 0 to 7 in	loam	moderate	1.20 to 1.56 in	6.6 to 8.4
Bk,C -- 7 to 60 in	loam	moderate	7.91 to 10.02 in	7.4 to 8.4

Waukon, eroded

Extent: 30 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 6 to 12 percent

Parent material: loamy glacial 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): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.89 in	6.1 to 7.3
Bt -- 8 to 21 in	clay loam	moderate	1.95 to 2.47 in	6.1 to 8.4
Bk,C -- 21 to 60 in	loam	moderate	5.85 to 7.41 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

979D2--Langhei-Waukon loams, 12 to 18 percent slopes, eroded

Langhei, eroded

Extent: 65 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 18 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .32

Land capability, nonirrigated 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>
Apk -- 0 to 7 in	loam	moderate	1.20 to 1.56 in	6.6 to 8.4
Bk,C -- 7 to 60 in	loam	moderate	7.91 to 10.02 in	7.4 to 8.4

Waukon, eroded

Extent: 25 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 12 to 18 percent

Parent material: loamy glacial 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): 5

Wind erodibility index (WEI): 56

Kw factor (surface layer) .28

Land capability, nonirrigated 4e

Hydric soil: no

Hydrologic group: B

Potential for frost action: moderate

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.89 in	6.1 to 7.3
Bt -- 8 to 21 in	clay loam	moderate	1.95 to 2.47 in	6.1 to 8.4
Bk,C -- 21 to 60 in	loam	moderate	5.85 to 7.41 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

987--Rockwell loam, depressional

Rockwell, depressional

Extent: 90 percent of the unit

Landform(s): depressions on till-floored lake plains

Slope gradient: 0 to 1 percent

Parent material: glaciolacustrine deposits over loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .15

Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile:

<i>Representative soil profile:</i>			<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap --	0 to 11 in	loam		moderate	1.98 to 2.43 in	7.4 to 8.4
Bkg --	11 to 18 in	fine sandy loam		moderately rapid	1.06 to 1.20 in	7.9 to 8.4
2Cg --	18 to 28 in	fine sand		rapid	0.49 to 0.69 in	7.4 to 7.8
3Cg --	28 to 60 in	silt loam		moderate	5.74 to 7.02 in	7.4 to 7.8

Map Unit Description (MN)

Clay County, Minnesota

1001--Haplaquolls and Udifluvents, level

Haplaquolls, level

Extent: 45 percent of the unit

Landform(s): flats on flood plains, swales on flood plains

Slope gradient: 0 to 2 percent

Parent material: alluvial deposits

Restrictive feature(s): greater than 60 inches

Flooding: frequent

Ponding: none

Drainage class: very poorly drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .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>
A -- 0 to 16 in	silt loam	moderate	2.91 to 3.87 in	5.6 to 7.8
Bkg,Cg -- 16 to 80 in	stratified loamy sand to silt loam	rapid	2.55 to 12.76 in	5.6 to 7.8

Udifluvents, level

Extent: 45 percent of the unit

Landform(s): flats on flood plains, swales on flood plains

Slope gradient: 0 to 2 percent

Parent material: alluvial deposits

Restrictive feature(s): greater than 60 inches

Flooding: frequent

Ponding: none

Drainage class: very poorly drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer) .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>
A -- 0 to 16 in	silt loam	moderate	2.91 to 3.87 in	5.6 to 7.8
Cg -- 16 to 80 in	stratified loamy sand to silt loam	rapid	2.55 to 12.76 in	5.6 to 7.8

Map Unit Description (MN)

Clay County, Minnesota

1005--Fluvaquents, loamy

Fluvaquents, loamy

Extent: 90 percent of the unit

Landform(s): abandoned channels on flood plains, swales on flood plains

Slope gradient: 0 to 2 percent

Parent material: recent alluvial deposits

Restrictive feature(s): greater than 60 inches

Flooding: frequent

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated 5w

Hydric soil: yes

Hydrologic group:

Potential for frost action:

Representative soil profile:

Texture

Permeability

Available water capacity

pH

Map Unit Description (MN)

Clay County, Minnesota

1006--Fluvaquents-Haploborolls complex

Fluvaquents

Extent: 55 percent of the unit

Landform(s): abandoned channels on flood plains, swales on flood plains

Slope gradient: 0 to 1 percent

Parent material: recent alluvial deposits

Restrictive feature(s): greater than 60 inches

Flooding: frequent

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor):

Wind erodibility group (WEG): 8

Wind erodibility index (WEI): 0

Kw factor (surface layer)

Land capability, nonirrigated

Hydric soil: yes

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>

Haploborolls

Extent: 35 percent of the unit

Landform(s): ridges on flood plains

Slope gradient: 0 to 1 percent

Parent material: recent alluvial deposits

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>

Map Unit Description (MN)

Clay County, Minnesota

1029--Pits, gravel

Pits, gravel

Extent: 100 percent of the unit

Landform(s): beach ridges on lake plains, hillslopes on moraines

Slope gradient: 0 to 45 percent

Parent material: sandy and gravelly outwash or beach deposits

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: unranked

Hydrologic group:

Potential for frost action:

Representative soil profile:

Texture

Permeability

Available water capacity

pH

Map Unit Description (MN)

Clay County, Minnesota

1055--Haplaquolls and Histosols, ponded

Haplaquolls, ponded

Extent: 45 percent of the unit

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

Slope gradient: 0 to 1 percent

Parent material: lacustrine deposits or glacial till

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated 8w

Hydric soil: yes

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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Histosols, ponded

Extent: 45 percent of the unit

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

Slope gradient: 0 to 1 percent

Parent material: herbaceous organic material

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated 8w

Hydric soil: yes

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)

Clay County, Minnesota

1819--Glyndon silty clay loam

Glyndon

Extent: 90 percent of the unit

Landform(s): rises on lake plains

Slope gradient: 0 to 2 percent

Parent material: silty lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .28

Land capability, nonirrigated 2s

Hydric soil: no

Hydrologic group: C

Potential for frost action: high

<i>Representative soil profile:</i>		<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A,Bk1,Bk2 --	0 to 29 in	silty clay loam	moderate	5.24 to 6.41 in	7.4 to 9.0
C --	29 to 60 in	very fine sand	moderately rapid	4.61 to 5.83 in	7.4 to 9.0

Map Unit Description (MN)

Clay County, Minnesota

1854--Wyndmere complex

Wyndmere, saline

Extent: 70 percent of the unit

Landform(s): flats on lake plains, rises on lake plains

Slope gradient: 0 to 2 percent

Parent material: loamy over sandy glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .15

Land capability, nonirrigated 3s

Hydric soil: no

Hydrologic group: A/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 10 in	fine sandy loam	moderately rapid	0.89 to 1.18 in	7.4 to 8.4
Ak,Bk1,Bk2 -- 10 to 29 in	fine sandy loam	moderately rapid	1.54 to 2.12 in	7.4 to 8.4
C1,C2g -- 29 to 60 in	fine sandy loam	moderately rapid	1.23 to 3.38 in	7.4 to 8.4

Wyndmere, moderately well drained

Extent: 20 percent of the unit

Landform(s): flats on lake plains, rises on lake plains

Slope gradient: 0 to 3 percent

Parent material: loamy over sandy glaciolacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated 2s

Hydric soil: no

Hydrologic group: B

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 8 in	fine sandy loam	moderately rapid	1.02 to 1.42 in	6.6 to 8.4
Ak,Bk1,Bk2 -- 8 to 26 in	fine sandy loam	moderately rapid	2.17 to 3.08 in	7.4 to 8.4
C1,C2g -- 26 to 60 in	fine sandy loam	rapid	1.69 to 5.42 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

1871--Fargo silty clay, swales

Fargo, swales

Extent: 90 percent of the unit

Landform(s): swales on lake plains

Slope gradient: 0 to 1 percent

Parent material: clayey lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .17

Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 12 in	silty clay	slow	1.77 to 2.13 in	6.6 to 7.8
Bg -- 12 to 24 in	clay	slow	1.71 to 2.07 in	6.6 to 8.4
Bkg,Cg -- 24 to 60 in	clay	slow	5.02 to 6.09 in	7.9 to 8.4

1872--Fargo silty clay, silty substratum

Fargo, silty substratum

Extent: 90 percent of the unit

Landform(s): flats on lake plains

Slope gradient: 0 to 1 percent

Parent material: clayey lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .17

Land capability, nonirrigated 2w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 8 in	silty clay	slow	1.18 to 1.42 in	6.6 to 7.3
A -- 8 to 16 in	silty clay	slow	1.16 to 1.41 in	6.6 to 8.4
Bkg -- 16 to 36 in	silty clay	slow	2.76 to 3.35 in	7.9 to 8.4
Cg -- 36 to 60 in	silty clay loam	moderate	3.60 to 4.80 in	7.9 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

1873--Fargo silty clay, silty substratum, swales

Fargo, silty substratum, swales

Extent: 90 percent of the unit

Landform(s): swales on lake plains

Slope gradient: 0 to 1 percent

Parent material: clayey lacustrine deposits

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: frequent

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4

Wind erodibility index (WEI): 86

Kw factor (surface layer) .17

Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
Ap -- 0 to 10 in	silty clay	slow	1.48 to 1.77 in	6.6 to 7.3
A -- 10 to 18 in	silty clay	slow	1.16 to 1.41 in	6.6 to 7.8
Bkg -- 18 to 30 in	silty clay	slow	1.65 to 2.01 in	7.9 to 8.4
Cg -- 30 to 60 in	silty clay loam	moderate	4.49 to 5.98 in	7.9 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

1874--Lohnes sandy loam

Lohnes

Extent: 90 percent of the unit

Landform(s): hillslopes on beach ridges, hillslopes on outwash plains

Slope gradient: 0 to 3 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .10

Land capability, nonirrigated 4e

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 14 in	sandy loam	rapid	1.42 to 1.84 in	6.6 to 7.8
Bw -- 14 to 23 in	loamy sand	rapid	0.26 to 0.61 in	6.6 to 7.8
C -- 23 to 60 in	coarse sand	rapid	1.11 to 2.59 in	7.4 to 8.4

1875--Flom clay loam, depressional

Flom, depressional

Extent: 90 percent of the unit

Landform(s): depressions on moraines

Slope gradient: 0 to 1 percent

Parent material: loamy glacial till

Restrictive feature(s): greater than 60 inches

Flooding: rare

Ponding: frequent

Drainage class: very poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .15

Land capability, nonirrigated 3w

Hydric soil: yes

Hydrologic group: C/D

Potential for frost action: high

<i>Representative soil profile:</i>	<i>Texture</i>	<i>Permeability</i>	<i>Available water capacity</i>	<i>pH</i>
A -- 0 to 14 in	clay loam	moderately slow	2.55 to 3.40 in	6.1 to 7.8
Bg -- 14 to 23 in	silty clay loam	moderately slow	1.30 to 1.65 in	6.6 to 8.4
Bkg,Cg -- 23 to 60 in	loam	moderately slow	5.18 to 7.03 in	7.4 to 8.4

Map Unit Description (MN)

Clay County, Minnesota

1876--Divide loam, loamy substratum

Divide, loamy substratum

Extent: 90 percent of the unit

Landform(s): hillslopes on moraines

Slope gradient: 0 to 3 percent

Parent material: water-worked loamy till over sandy and gravelly outwash deposits

Restrictive feature(s): greater than 60 inches

Flooding: none

Ponding: none

Drainage class: moderately well drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 6

Wind erodibility index (WEI): 48

Kw factor (surface layer) .20

Land capability, nonirrigated 3s

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 13 in	loam	moderate	2.34 to 2.86 in	7.4 to 8.4
Bk -- 13 to 21 in	loam	moderate	1.26 to 1.50 in	7.4 to 8.4
2Cg1 -- 21 to 44 in	stratified sand to gravelly sand	rapid	0.70 to 1.63 in	7.4 to 8.4
3Cg2 -- 44 to 60 in	loam	moderate	2.52 to 2.99 in	7.4 to 8.4

M-W--Water, miscellaneous

Water, miscellaneous

Extent: 100 percent of the unit

Landform(s):

Slope gradient:

Parent material:

Restrictive feature(s): greater than 60 inches

Flooding:

Ponding:

Drainage class:

Soil loss tolerance (T factor):

Wind erodibility group (WEG):

Wind erodibility index (WEI):

Kw factor (surface layer)

Land capability, nonirrigated

Hydric soil: unranked

Hydrologic group:

Potential for frost action:

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

Clay 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: unranked

Hydrologic group:

Potential for frost action:

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