Map Unit Description (MN)

Grant 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]

26--Aazdahl clay loam, 1 to 3 percent slopes

Aazdahl

Extent: 85 percent of the unit
Landform(s): flats on till plains, rises on till plains
Slope gradient: 1 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	clay loam	moderate	2.4 to 2.7 in	6.6 to 7.3
Bw -- 14 to 20 in	clay loam	moderately slow	1.0 to 1.1 in	6.6 to 7.8
Bk -- 20 to 36 in	clay loam	moderately slow	2.2 to 2.7 in	7.4 to 8.4
C -- 36 to 60 in	clay loam	moderately slow	3.4 to 4.1 in	7.4 to 8.4

33B--Barnes loam, 2 to 5 percent slopes

Barnes

Extent: 85 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 2 to 5 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.4 to 1.9 in	6.1 to 7.8
Bw -- 8 to 16 in	loam	moderate	1.2 to 1.6 in	6.1 to 7.8
Bk,C -- 16 to 60 in	loam	moderate	6.1 to 8.3 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

34--Parnell silty clay loam

Parnell

Extent: 85 percent of the unit
Landform(s): depressions on moraines
Slope gradient: 0 to 1 percent
Parent material: local colluvium and loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 7
Wind erodibility index (WEI): 38
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	silty clay loam	moderately slow	3.4 to 4.2 in	6.1 to 7.8
Btg -- 19 to 41 in	silty clay	slow	2.9 to 4.2 in	6.1 to 7.8
Cg -- 41 to 60 in	silty clay loam	slow	2.1 to 3.6 in	6.6 to 8.4

36--Flom silty clay loam

Flom

Extent: 85 percent of the unit
Landform(s): swales on till plains
Slope gradient: 0 to 2 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 17 in	silty clay loam	moderately slow	3.0 to 3.7 in	6.1 to 7.8
Bg -- 17 to 21 in	clay loam	moderately slow	0.6 to 0.7 in	6.6 to 8.4
C -- 21 to 60 in	clay loam	moderately slow	5.5 to 7.4 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

38C--Waukon loam, 4 to 12 percent slopes

Waukon

Extent: 85 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 4 to 12 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	loam	moderate	1.2 to 1.4 in	6.1 to 7.3
E,Bt -- 6 to 27 in	clay loam	moderate	3.1 to 4.0 in	6.1 to 8.4
C -- 27 to 60 in	loam	moderate	5.0 to 6.3 in	7.4 to 8.4

38D--Waukon loam, 12 to 24 percent slopes

Waukon

Extent: 85 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 12 to 24 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	loam	moderate	1.2 to 1.4 in	6.1 to 7.3
E,Bt -- 6 to 27 in	clay loam	moderate	3.1 to 4.0 in	6.1 to 8.4
C -- 27 to 60 in	loam	moderate	5.0 to 6.3 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

45B--Maddock loamy sand, 1 to 6 percent slopes

Maddock

Extent: 90 percent of the unit
Landform(s): hillslopes on outwash plains
Slope gradient: 1 to 6 percent
Parent material: sandy outwash deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 12 in	loamy sand	rapid	1.2 to 1.4 in	6.6 to 7.8
Bw,C -- 12 to 60 in	fine sand	rapid	2.4 to 4.8 in	6.6 to 8.4

45C--Maddock loamy sand, 6 to 18 percent slopes

Maddock

Extent: 90 percent of the unit
Landform(s): hillslopes on outwash plains
Slope gradient: 6 to 18 percent
Parent material: sandy outwash deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 12 in	loamy sand	rapid	1.2 to 1.4 in	6.6 to 7.8
Bw,C -- 12 to 60 in	fine sand	rapid	2.4 to 4.8 in	6.6 to 8.4

Map Unit Description (MN)

Grant 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]

57--Fargo silty clay

Fargo

Extent: 85 percent of the unit
Landform(s): flats on lake plains
Slope gradient: 0 to 1 percent
Parent material: clayey lacustrine sediments
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	silty clay	slow	1.9 to 2.3 in	6.6 to 7.8
Bw -- 13 to 18 in	silty clay	slow	0.7 to 0.9 in	6.6 to 8.4
Cg -- 18 to 60 in	silty clay	slow	5.8 to 7.1 in	7.9 to 8.4

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

Kittson

Extent: 85 percent of the unit
Landform(s): flats on till-floored lake plains, rises on till-floored lake plains
Slope gradient: 0 to 2 percent
Parent material: glaciolacustrine deposits over loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 10 in	very fine sandy loam	moderately rapid	2.0 to 2.2 in	6.6 to 7.8
Bw -- 10 to 17 in	very fine sandy loam	moderate	1.2 to 1.3 in	6.6 to 7.8
2C -- 17 to 60 in	clay loam	moderate	6.4 to 7.7 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

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

Glyndon

Extent: 85 percent of the unit
Landform(s): flats on lake plains, rises on lake plains
Slope gradient: 0 to 2 percent
Parent material: silty glaciolacustrine sediments
Restrictive feature(s):
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: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 10 in	silt loam	moderate	2.0 to 2.3 in	7.4 to 8.4
Bk -- 10 to 23 in	silt loam	moderately rapid	2.2 to 2.6 in	7.4 to 8.4
2C -- 23 to 60 in	loamy very fine sand	moderately rapid	5.6 to 7.0 in	7.4 to 8.4

61--Arveson fine sandy loam

Arveson

Extent: 85 percent of the unit
Landform(s): flats on outwash plains, swales on outwash plains
Slope gradient: 0 to 2 percent
Parent material: loamy mantle over sandy outwash deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 14 in	fine sandy loam	moderately rapid	1.8 to 2.1 in	7.4 to 8.4
Ak -- 14 to 34 in	fine sandy loam	moderately rapid	3.0 to 3.3 in	7.4 to 8.4
2C -- 34 to 60 in	fine sand	rapid	1.3 to 3.9 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

63--Rockwell loam

Rockwell

Extent: 85 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 sediments over loamy glacial tilltill

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1 -- 0 to 13 in	loam	moderate	2.3 to 2.9 in	7.4 to 8.4
A2 -- 13 to 24 in	sandy loam	moderately rapid	1.7 to 1.9 in	7.9 to 8.4
Bkg -- 24 to 35 in	fine sand	rapid	0.6 to 0.8 in	7.4 to 7.8
2Cg -- 35 to 60 in	clay loam	moderate	4.5 to 5.5 in	7.4 to 7.8

Map Unit Description (MN)

Grant 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]

64--Ulen loamy fine sand, 0 to 2 percent slopes

Ulen

Extent: 85 percent of the unit
Landform(s): flats on lake plains, rises on lake plains
Slope gradient: 0 to 2 percent
Parent material: sandy glaciolacustine deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,Ak -- 0 to 16 in	loamy fine sand	rapid	1.6 to 1.9 in	7.4 to 8.4
Bk -- 16 to 22 in	fine sand	rapid	0.3 to 0.5 in	7.9 to 8.4
C -- 22 to 60 in	fine sand	rapid	1.9 to 3.0 in	7.4 to 8.4

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

Bearden

Extent: 85 percent of the unit
Landform(s): flats on lake plains, rises on lake plains
Slope gradient: 0 to 2 percent
Parent material: silty glaciolacustrine deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	silt loam	moderate	1.6 to 1.9 in	7.4 to 8.4
ABk,Bk -- 8 to 22 in	silt loam	moderately slow	2.3 to 3.1 in	7.4 to 8.4
C -- 22 to 60 in	silt loam	slow	6.0 to 8.3 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

70--Svea loam, 1 to 3 percent slopes

Svea

Extent: 85 percent of the unit
Landform(s): hillslopes on moraines, flats on till plains, rises on till plains
Slope gradient: 1 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 15 in	loam	moderate	2.7 to 3.0 in	6.1 to 7.8
Bw -- 15 to 24 in	loam	moderate	1.5 to 2.0 in	6.6 to 7.8
Bk,C -- 24 to 60 in	loam	moderate	5.0 to 6.8 in	7.4 to 8.4

108--McIntosh silt loam, 0 to 2 percent slopes

McIntosh

Extent: 85 percent of the unit
Landform(s): rises on till plains, rises on till-floored lake plains
Slope gradient: 0 to 2 percent
Parent material: silty glaciolacustrine deposits over loamy glacial till
Restrictive feature(s):
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: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,Ak -- 0 to 12 in	silt loam	moderate	2.4 to 2.8 in	7.4 to 8.4
Bk -- 12 to 27 in	silt loam	moderate	2.5 to 3.4 in	7.4 to 8.4
2C -- 27 to 60 in	clay loam	moderate	4.6 to 6.2 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

127B--Sverdrup sandy loam, 2 to 6 percent slopes

Sverdrup

Extent: 85 percent of the unit

Landform(s): hillslopes on outwash plains, hillslopes on till plains

Slope gradient: 2 to 6 percent

Parent material: loamy mantle over sandy outwash

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 3e

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.3 to 1.5 in	6.1 to 7.3
Bw -- 10 to 24 in	loamy sand	moderately rapid	1.1 to 2.0 in	6.1 to 7.8
2C -- 24 to 60 in	sand	rapid	0.7 to 2.1 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

171B--Formdale clay loam, 2 to 5 percent slopes

Formdale

Extent: 85 percent of the unit
Landform(s): hillslopes on till plains
Slope gradient: 2 to 5 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderate	1.5 to 1.7 in	6.1 to 7.3
Bw -- 9 to 16 in	clay loam	moderately slow	1.2 to 1.3 in	6.6 to 7.8
Bk -- 16 to 34 in	clay loam	moderately slow	2.5 to 3.4 in	7.4 to 8.4
C -- 34 to 60 in	clay loam	moderately slow	3.6 to 4.9 in	7.4 to 8.4

184--Hamerly clay loam, 1 to 3 percent slopes

Hamerly

Extent: 85 percent of the unit
Landform(s): flats on till plains, rises on till plains
Slope gradient: 1 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	clay loam	moderate	2.0 to 2.6 in	6.6 to 8.4
Bk -- 12 to 26 in	clay loam	moderate	2.1 to 2.7 in	7.4 to 8.4
C -- 26 to 60 in	clay loam	moderate	4.7 to 6.4 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

212B--Sinai silty clay, 1 to 6 percent slopes

Sinai

Extent: 85 percent of the unit
Landform(s): glacial lakes on hillslopes on moraines
Slope gradient: 1 to 6 percent
Parent material: clayey glaciolacustrine deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	silty clay	slow	2.5 to 3.0 in	6.1 to 7.3
Bw -- 19 to 25 in	silty clay	slow	1.1 to 1.2 in	6.6 to 7.8
C1 -- 25 to 34 in	silty clay	slow	1.0 to 1.5 in	7.4 to 8.4
C2 -- 34 to 60 in	silty clay	slow	2.9 to 4.4 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

212C--Sinai silty clay, 6 to 12 percent slopes

Sinai

Extent: 85 percent of the unit
Landform(s): glacial lakes on hillslopes on moraines
Slope gradient: 6 to 12 percent
Parent material: clayey glaciolacustrine deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	silty clay	slow	2.5 to 3.0 in	6.1 to 7.3
Bw -- 19 to 25 in	silty clay	slow	1.1 to 1.2 in	6.6 to 7.8
C1 -- 25 to 34 in	silty clay	slow	1.0 to 1.5 in	7.4 to 8.4
C2 -- 34 to 60 in	silty clay	slow	2.9 to 4.4 in	7.4 to 8.4

220E--Langhei loam, 18 to 35 percent slopes

Langhei

Extent: 85 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 18 to 35 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 5 in	loam	moderate	0.9 to 1.1 in	6.6 to 8.4
Bk,C -- 5 to 60 in	loam	moderate	8.2 to 10.4 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

236--Vallers clay loam

Vallers

Extent: 85 percent of the unit
Landform(s): rims on depressions on moraines, flats on moraines
Slope gradient: 0 to 2 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	clay loam	moderately slow	2.6 to 3.1 in	7.4 to 8.4
Bkg -- 14 to 25 in	clay loam	moderately slow	1.7 to 2.1 in	7.4 to 8.4
Cg -- 25 to 60 in	loam	moderately slow	5.9 to 6.6 in	7.4 to 8.4

276--Oldham silty clay loam

Oldham

Extent: 85 percent of the unit
Landform(s): depressions on moraines, glacial lakes on moraines
Slope gradient: 0 to 1 percent
Parent material: silty and clayey glaciolacustrine deposits
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silty clay loam	moderately slow	1.2 to 1.7 in	6.6 to 7.8
A -- 9 to 39 in	silty clay loam	moderately slow	4.2 to 6.0 in	7.4 to 8.4
C -- 39 to 60 in	silty clay loam	moderately slow	2.9 to 4.2 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

290B--Rothsay silt loam, 2 to 6 percent slopes

Rothsay

Extent: 85 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 2 to 6 percent
Parent material: silty glaciolacustrine deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 15 in	silt loam	moderate	3.3 to 3.6 in	6.6 to 7.3
Bw -- 15 to 26 in	silt loam	moderate	1.9 to 2.4 in	6.6 to 7.8
C -- 26 to 60 in	silt loam	moderately rapid	6.8 to 7.4 in	7.4 to 8.4

330--Towner fine sandy loam, 0 to 2 percent slopes

Towner

Extent: 85 percent of the unit
Landform(s): rises on lake plains, rises on till plains
Slope gradient: 0 to 2 percent
Parent material: loamy and sandy glaciolacustrine deposits over loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	fine sandy loam	moderately rapid	1.2 to 1.6 in	6.6 to 7.8
Bw -- 9 to 26 in	loamy fine sand	rapid	1.0 to 2.2 in	6.6 to 7.8
2C -- 26 to 60 in	clay loam	moderate	4.7 to 7.4 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

335--Urness mucky silt loam

Urness

Extent: 85 percent of the unit

Landform(s): depressions on moraines, lakebeds (relict) on moraines, depressions on till plains, lakebeds (relict) on till plains

Slope gradient: 0 to 1 percent

Parent material: coprogenous earth

Restrictive feature(s):

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) .28

Land capability, nonirrigated: 3w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	mucky silt loam	moderate	1.4 to 1.9 in	7.4 to 8.4
C -- 8 to 47 in	mucky silt loam	moderate	6.2 to 8.6 in	7.4 to 8.4
2C -- 47 to 60 in	silty clay loam	moderate	1.8 to 2.6 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

339--Fordville loam, 0 to 2 percent slopes

Fordville

Extent: 85 percent of the unit
Landform(s): hillslopes on outwash plains
Slope gradient: 0 to 2 percent
Parent material: loamy mantle over sandy and gravelly outwash
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 12 in	loam	moderate	2.1 to 2.4 in	6.1 to 7.3
Bw -- 12 to 20 in	loam	moderate	1.5 to 1.7 in	6.1 to 7.8
2Bk -- 20 to 30 in	gravelly loam	moderately rapid	1.2 to 1.8 in	6.1 to 8.4
C -- 30 to 60 in	gravelly coarse sand	very rapid	0.9 to 1.8 in	7.4 to 8.4

[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]

341--Arvilla sandy loam, 0 to 2 percent slopes

Arvilla

Extent: 85 percent of the unit

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

Slope gradient: 0 to 2 percent

Parent material: loamy mantle over sandy and gravelly outwash

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .20

Land capability, nonirrigated: 3s

Hydric soil: no

Hydrologic group: B

Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.0 to 1.2 in	6.1 to 8.4
Bw -- 8 to 12 in	coarse sandy loam	moderately rapid	0.4 to 0.6 in	6.6 to 8.4
2Bk,2C -- 12 to 60 in	gravelly coarse sand	very rapid	1.0 to 2.4 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

341B--Arvilla sandy loam, 2 to 6 percent slopes

Arvilla

Extent: 85 percent of the unit
Landform(s): hillslopes on beach plains, hillslopes on outwash plains
Slope gradient: 2 to 6 percent
Parent material: loamy mantle over sandy and gravelly outwash
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: B
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	sandy loam	moderately rapid	1.0 to 1.2 in	6.1 to 8.4
Bw -- 8 to 12 in	coarse sandy loam	moderately rapid	0.4 to 0.6 in	6.6 to 8.4
2Bk,2C -- 12 to 60 in	gravelly coarse sand	very rapid	1.0 to 2.4 in	7.4 to 8.4

343--Wheatville very fine sandy loam, 0 to 2 percent slopes

Wheatville

Extent: 85 percent of the unit
Landform(s): flats on lake plains, rises on lake plains
Slope gradient: 0 to 2 percent
Parent material: glaciolacustrine deposits over clayey material
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,Ak -- 0 to 13 in	very fine sandy loam	moderately rapid	2.3 to 2.9 in	7.4 to 8.4
Bk,C -- 13 to 29 in	loamy very fine sand	moderately rapid	2.7 to 3.6 in	7.4 to 8.4
2C -- 29 to 60 in	silty clay	slow	3.1 to 5.8 in	7.4 to 7.8

Map Unit Description (MN)

Grant 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]

344--Quam silty clay loam

Quam

Extent: 85 percent of the unit
Landform(s): depressions on moraines, depressions on till plains
Slope gradient: 0 to 1 percent
Parent material: local alluvium and loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 7
Wind erodibility index (WEI): 38
Kw factor (surface layer) .24
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silty clay loam	moderately slow	1.3 to 1.6 in	6.6 to 7.8
A -- 7 to 39 in	silty clay loam	moderately slow	5.1 to 7.0 in	6.6 to 7.8
C -- 39 to 60 in	silty clay loam	moderately slow	2.9 to 4.0 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

359--Lamoure silt loam, frequently flooded

Lamoure, frequently flooded

Extent: 85 percent of the unit
Landform(s): flats on flood plains, swales on flood plains
Slope gradient: 0 to 1 percent
Parent material: silty alluvium
Restrictive feature(s):
Flooding: frequent
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: 6w
Hydric soil: yes
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A1 -- 0 to 19 in	silt loam	moderate	3.6 to 4.2 in	7.4 to 8.4
A2 -- 19 to 32 in	silty clay loam	moderate	2.2 to 2.6 in	7.4 to 8.4
Bg -- 32 to 43 in	silty clay loam	moderate	1.9 to 2.2 in	7.4 to 8.4
2Cg -- 43 to 60 in	stratified sandy loam to silty clay loam	moderate	1.5 to 3.0 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

366--Hecla loamy fine sand, 0 to 2 percent slopes

Hecla

Extent: 85 percent of the unit
Landform(s): flats on beach plains, rises on beach plains
Slope gradient: 0 to 2 percent
Parent material: sandy outwash
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loamy fine sand	rapid	0.9 to 1.1 in	6.1 to 7.3
A -- 9 to 15 in	loamy fine sand	rapid	0.5 to 0.6 in	6.1 to 7.8
Bw -- 15 to 26 in	fine sand	rapid	0.7 to 1.1 in	6.6 to 8.4
C -- 26 to 60 in	fine sand	moderately rapid	4.4 to 5.4 in	6.6 to 8.4

Map Unit Description (MN)

Grant 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]

375--Forada sandy loam

Forada

Extent: 85 percent of the unit

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

Slope gradient: 0 to 2 percent

Parent material: loamy mantle over sandy and gravelly outwash

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 4

Wind erodibility group (WEG): 3

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 15 in	sandy loam	moderate	3.0 to 3.3 in	6.1 to 7.8
Bg -- 15 to 23 in	sandy clay loam	moderately rapid	0.9 to 1.5 in	6.1 to 7.8
2C -- 23 to 60 in	gravelly coarse sand	rapid	0.7 to 3.7 in	6.6 to 8.4

Map Unit Description (MN)

Grant 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]

402B--Sioux loamy coarse sand, 0 to 6 percent slopes

Sioux

Extent: 90 percent of the unit
Landform(s): hillslopes on beach plains, hillslopes on outwash plains
Slope gradient: 0 to 6 percent
Parent material: sandy and gravelly outwash deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	loamy coarse sand	moderately rapid	0.9 to 1.3 in	6.6 to 8.4
C -- 11 to 60 in	stratified gravelly coarse sand to sand	very rapid	1.5 to 2.9 in	7.4 to 8.4

402C--Sioux loamy coarse sand, 6 to 12 percent slopes

Sioux

Extent: 90 percent of the unit
Landform(s): hillslopes on beach plains, hillslopes on outwash plains
Slope gradient: 6 to 12 percent
Parent material: sandy and gravelly outwash deposits
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .17
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loamy coarse sand	moderately rapid	0.7 to 1.1 in	6.6 to 8.4
C -- 9 to 60 in	stratified gravelly coarse sand to sand	very rapid	1.5 to 3.0 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

402D--Sioux gravelly loamy coarse sand, 12 to 35 percent slopes

Sioux

Extent: 90 percent of the unit

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

Slope gradient: 12 to 35 percent

Parent material: sandy and gravelly outwash deposits

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: excessively drained

Soil loss tolerance (T factor): 2

Wind erodibility group (WEG): 2

Wind erodibility index (WEI): 134

Kw factor (surface layer) .17

Land capability, nonirrigated: 7s

Hydric soil: no

Hydrologic group: A

Potential for frost action: low

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 9 in	gravelly loamy coarse sand	moderately rapid	0.7 to 1.1 in	6.6 to 8.4
C --	9 to 60 in	stratified gravelly coarse sand to sand	very rapid	1.5 to 3.0 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

418--Lamoure silt loam

Lamoure, occasionally flooded

Extent: 85 percent of the unit
Landform(s): swales on flood plains on moraines
Slope gradient: 0 to 1 percent
Parent material: silty alluvium
Restrictive feature(s):
Flooding: occasional
Ponding: none
Drainage class: poorly drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A1 -- 0 to 19 in	silt loam	moderate	3.6 to 4.2 in	7.4 to 8.4
A2 -- 19 to 32 in	silty clay loam	moderate	2.2 to 2.6 in	7.4 to 8.4
Bg -- 32 to 43 in	silty clay loam	moderate	1.9 to 2.2 in	7.4 to 8.4
2Cg -- 43 to 60 in	stratified sandy loam to silty clay loam	moderate	1.5 to 3.0 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

419--Vallers clay loam, firm subsoil

Vallers, firm subsoil

Extent: 85 percent of the unit
Landform(s): flats on till-floored lake plains, swales on till-floored lake plains
Slope gradient: 0 to 2 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	clay loam	moderately slow	2.6 to 3.1 in	7.4 to 8.4
Bkg -- 14 to 25 in	clay loam	moderately slow	1.7 to 2.1 in	7.4 to 8.4
Cg -- 25 to 60 in	clay loam	moderately slow	5.9 to 6.6 in	7.4 to 8.4

494B--Darnen loam, 1 to 4 percent slopes

Darnen

Extent: 85 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 1 to 4 percent
Parent material: local colluvium and loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 28 in	loam	moderate	5.6 to 6.7 in	6.6 to 7.8
Bw -- 28 to 45 in	clay loam	moderate	2.5 to 3.2 in	6.1 to 7.8
C -- 45 to 60 in	clay loam	moderate	2.1 to 2.8 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

582--Roliss loam

Roliss

Extent: 85 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: loamy glacial till

Restrictive feature(s):

Flooding: none

Ponding: none

Drainage class: poorly drained

Soil loss tolerance (T factor): 5

Wind erodibility group (WEG): 4L

Wind erodibility index (WEI): 86

Kw factor (surface layer) .24

Land capability, nonirrigated: 2w

Hydric soil: yes

Hydrologic group: B/D

Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 11 in	loam	moderate	1.9 to 2.6 in	6.6 to 8.4
Bg1 -- 11 to 16 in	loam	moderate	0.8 to 1.0 in	7.4 to 8.4
Bg2 -- 16 to 24 in	clay loam	moderate	1.2 to 1.5 in	7.4 to 8.4
Cg -- 24 to 60 in	clay loam	moderate	5.4 to 6.8 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

900--Aazdahl-Hamerly-Parnell complex, 0 to 2 percent slopes

Aazdahl

Extent: 30 percent of the unit
Landform(s): flats on till plains, rises on till plains
Slope gradient: 0 to 2 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	clay loam	moderate	2.4 to 2.7 in	6.6 to 7.3
Bw -- 14 to 20 in	clay loam	moderately slow	1.0 to 1.1 in	6.6 to 7.8
Bk,C -- 20 to 60 in	clay loam	moderately slow	5.6 to 6.8 in	7.4 to 8.4

Hamerly

Extent: 30 percent of the unit
Landform(s): flats on till plains, rises on till plains
Slope gradient: 1 to 2 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 8 in	clay loam	moderate	1.3 to 1.7 in	6.6 to 8.4
Bk -- 8 to 19 in	clay loam	moderate	1.7 to 2.1 in	7.4 to 8.4
C -- 19 to 60 in	clay loam	moderate	5.7 to 7.8 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

900--Aazdahl-Hamerly-Parnell complex, 0 to 2 percent slopes

Parnell

Extent: 20 percent of the unit
Landform(s): depressions on till plains
Slope gradient: 0 to 1 percent
Parent material: local colluvium and loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 7
Wind erodibility index (WEI): 38
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	silty clay loam	moderately slow	3.4 to 4.2 in	6.1 to 7.8
Btg -- 19 to 41 in	silty clay	slow	2.9 to 4.2 in	6.1 to 7.8
Cg -- 41 to 60 in	silty clay loam	slow	2.1 to 3.6 in	6.6 to 8.4

[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]

903B--Barnes-Langhei loams, 3 to 6 percent slopes

Barnes

Extent: 50 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 3 to 6 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.4 to 1.9 in	6.1 to 7.8
Bw -- 8 to 16 in	loam	moderate	1.2 to 1.6 in	6.1 to 7.8
Bk,C -- 16 to 60 in	loam	moderate	6.1 to 8.3 in	7.4 to 8.4

Langhei

Extent: 30 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 3 to 6 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 5 in	loam	moderate	0.9 to 1.1 in	6.6 to 8.4
Bk,C -- 5 to 60 in	loam	moderate	8.2 to 10.4 in	7.4 to 8.4

[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]

907B--Barnes-Svea loams, 1 to 3 percent slopes

Barnes

Extent: 50 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 1 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.4 to 1.9 in	6.1 to 7.8
Bw -- 8 to 16 in	loam	moderate	1.2 to 1.6 in	6.1 to 7.8
Bk,C -- 16 to 60 in	loam	moderate	6.1 to 8.3 in	7.4 to 8.4

Svea

Extent: 30 percent of the unit
Landform(s): flats on moraines, swales on moraines
Slope gradient: 1 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 15 in	loam	moderate	2.7 to 3.0 in	6.1 to 7.8
Bw -- 15 to 24 in	loam	moderate	1.5 to 2.0 in	6.6 to 7.8
Bk,C -- 24 to 60 in	loam	moderate	5.0 to 6.8 in	7.4 to 8.4

[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]

912B--Formdale-Aazdahl-Flom complex, 1 to 4 percent slopes

Formdale

Extent: 30 percent of the unit
Landform(s): hillslopes on till plains
Slope gradient: 2 to 4 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderate	1.5 to 1.7 in	6.1 to 7.3
Bw -- 9 to 16 in	clay loam	moderately slow	1.2 to 1.3 in	6.6 to 7.8
Bk,C -- 16 to 60 in	clay loam	moderately slow	6.1 to 8.3 in	7.4 to 8.4

Aazdahl

Extent: 30 percent of the unit
Landform(s): flats on till plains, rises on till plains
Slope gradient: 1 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	clay loam	moderate	2.4 to 2.7 in	6.6 to 7.3
Bw -- 14 to 20 in	clay loam	moderately slow	1.0 to 1.1 in	6.6 to 7.8
Bk,C -- 20 to 60 in	clay loam	moderately slow	5.6 to 6.8 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

912B--Formdale-Aazdahl-Flom complex, 1 to 4 percent slopes

Flom

Extent: 20 percent of the unit
Landform(s): swales on till plains
Slope gradient: 1 to 3 percent
Parent material: till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 17 in	silty clay loam	moderately slow	3.0 to 3.7 in	6.1 to 7.8
Bg -- 17 to 21 in	clay loam	moderately slow	0.6 to 0.7 in	6.6 to 8.4
C -- 21 to 60 in	clay loam	moderately slow	5.5 to 7.4 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

914--Grimstad-Towner complex, 0 to 2 percent slopes

Grimstad

Extent: 50 percent of the unit
Landform(s): flats on till-floored lake plains, rises on till-floored lake plains
Slope gradient: 0 to 2 percent
Parent material: sandy glaciolacustrine deposits over loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .28
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 15 in	very fine sandy loam	moderately rapid	3.0 to 3.3 in	7.4 to 8.4
Bk -- 15 to 26 in	loamy fine sand	rapid	0.6 to 1.9 in	7.4 to 9.0
2C -- 26 to 60 in	loam	moderate	5.1 to 6.4 in	7.4 to 9.0

Towner

Extent: 30 percent of the unit
Landform(s): flats on lake plains, rises on lake plains
Slope gradient: 0 to 2 percent
Parent material: loamy and sandy glaciolacustrine deposits over loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	fine sandy loam	moderately rapid	1.2 to 1.6 in	6.6 to 7.8
Bw -- 9 to 26 in	loamy fine sand	rapid	1.0 to 2.2 in	6.6 to 7.8
2C -- 26 to 60 in	clay loam	moderate	4.7 to 7.4 in	7.4 to 8.4

[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]

922--Hamerly-Parnell complex, 0 to 3 percent slopes

Hamerly

Extent: 50 percent of the unit
Landform(s): flats on till plains, rises on till plains
Slope gradient: 0 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	clay loam	moderate	1.3 to 1.7 in	6.6 to 8.4
Bk -- 8 to 19 in	clay loam	moderate	1.7 to 2.1 in	7.4 to 8.4
C -- 19 to 60 in	clay loam	moderate	5.7 to 7.8 in	7.4 to 8.4

Parnell

Extent: 30 percent of the unit
Landform(s): depressions on till plains, drainageways on till plains
Slope gradient: 0 to 3 percent
Parent material: local colluvium and loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 7
Wind erodibility index (WEI): 38
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	silty clay loam	moderately slow	3.4 to 4.2 in	6.1 to 7.8
Btg -- 19 to 41 in	silty clay	slow	2.9 to 4.2 in	6.1 to 7.8
Cg -- 41 to 60 in	silty clay loam	slow	2.1 to 3.6 in	6.6 to 8.4

Map Unit Description (MN)

Grant 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]

931B--Formdale-Langhei clay loams, 3 to 6 percent slopes

Formdale

Extent: 50 percent of the unit
Landform(s): hillslopes on till plains
Slope gradient: 3 to 6 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	clay loam	moderate	1.5 to 1.7 in	6.1 to 7.3
Bw -- 9 to 16 in	clay loam	moderately slow	1.2 to 1.3 in	6.6 to 7.8
Bk,C -- 16 to 60 in	clay loam	moderately slow	6.1 to 8.3 in	7.4 to 8.4

Langhei

Extent: 30 percent of the unit
Landform(s): hillslopes on till plains
Slope gradient: 3 to 6 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 5 in	clay loam	moderate	0.9 to 1.1 in	6.6 to 8.4
Bk,C -- 5 to 60 in	loam	moderate	8.2 to 10.4 in	7.4 to 8.4

[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]

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

Langhei, eroded

Extent: 50 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 6 to 12 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 5 in	loam	moderate	0.9 to 1.1 in	6.6 to 8.4
Bk,C --	5 to 60 in	loam	moderate	8.2 to 10.4 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):
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) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 8 in	loam	moderate	1.4 to 1.9 in	6.1 to 7.8
Bw --	8 to 16 in	loam	moderate	1.2 to 1.6 in	6.1 to 7.8
Bk,C --	16 to 60 in	loam	moderate	6.1 to 8.3 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

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

Langhei, eroded

Extent: 50 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 12 to 18 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 5 in	loam	moderate	0.9 to 1.1 in	6.6 to 8.4
Bk,C --	5 to 60 in	loam	moderate	8.2 to 10.4 in	7.4 to 8.4

Barnes, eroded

Extent: 30 percent of the unit
Landform(s): hillslopes on moraines
Slope gradient: 12 to 18 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 8 in	loam	moderate	1.4 to 1.9 in	6.1 to 7.8
Bw --	8 to 16 in	loam	moderate	1.2 to 1.6 in	6.1 to 7.8
Bk,C --	16 to 60 in	loam	moderate	6.1 to 8.3 in	7.4 to 8.4

[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]

943C2--Langhei-Formdale clay loams, 6 to 12 percent slopes, eroded

Langhei, eroded

Extent: 50 percent of the unit
Landform(s): hillslopes on till plains
Slope gradient: 6 to 12 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 5 in	clay loam	moderate	0.9 to 1.1 in	6.6 to 8.4
Bk,C --	5 to 60 in	loam	moderate	8.2 to 10.4 in	7.4 to 8.4

Formdale, eroded

Extent: 30 percent of the unit
Landform(s): hillslopes on till plains
Slope gradient: 6 to 12 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 9 in	clay loam	moderate	1.5 to 1.7 in	6.1 to 7.3
Bw --	9 to 16 in	clay loam	moderately slow	1.2 to 1.3 in	6.6 to 7.8
Bk,C --	16 to 60 in	clay loam	moderately slow	6.1 to 8.3 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

943D2--Langhei-Formdale clay loams, 12 to 18 percent slopes, eroded

Langhei, eroded

Extent: 50 percent of the unit
Landform(s): hillslopes on till plains
Slope gradient: 12 to 18 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 5 in	clay loam	moderate	0.9 to 1.1 in	6.6 to 8.4
Bk,C --	5 to 60 in	loam	moderate	8.2 to 10.4 in	7.4 to 8.4

Formdale, eroded

Extent: 30 percent of the unit
Landform(s): hillslopes on till plains
Slope gradient: 12 to 18 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:		*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap --	0 to 9 in	clay loam	moderate	1.5 to 1.7 in	6.1 to 7.3
Bw --	9 to 16 in	clay loam	moderately slow	1.2 to 1.3 in	6.6 to 7.8
Bk,C --	16 to 60 in	clay loam	moderately slow	6.1 to 8.3 in	7.4 to 8.4

[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]

962--Svea-Hamerly loams, 1 to 3 percent slopes

Svea

Extent: 50 percent of the unit
Landform(s): flats on moraines, rises on moraines
Slope gradient: 1 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 1
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 15 in	loam	moderate	2.7 to 3.0 in	6.1 to 7.8
Bw -- 15 to 24 in	loam	moderate	1.5 to 2.0 in	6.6 to 7.8
Bk,C -- 24 to 60 in	loam	moderate	5.0 to 6.8 in	7.4 to 8.4

Hamerly

Extent: 40 percent of the unit
Landform(s): flats on moraines, rises on moraines
Slope gradient: 1 to 3 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2s
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.4 to 1.9 in	6.6 to 8.4
Bk -- 8 to 19 in	clay loam	moderate	1.7 to 2.1 in	7.4 to 8.4
C -- 19 to 60 in	clay loam	moderately slow	5.7 to 7.8 in	7.4 to 8.4

[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]

970--Rockwell-Vallers complex

Rockwell

Extent: 50 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 sediments over loamy glacial tilltill
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1 -- 0 to 13 in	loam	moderate	2.3 to 2.9 in	7.4 to 8.4
A2 -- 13 to 24 in	sandy loam	moderately rapid	1.7 to 1.9 in	7.9 to 8.4
Bkg -- 24 to 35 in	fine sand	rapid	0.6 to 0.8 in	7.4 to 7.8
2Cg -- 35 to 60 in	clay loam	moderate	4.5 to 5.5 in	7.4 to 7.8

Vallers

Extent: 40 percent of the unit
Landform(s): flats on lake plains, swales on lake plains
Slope gradient: 0 to 2 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	clay loam	moderately slow	2.6 to 3.1 in	7.4 to 8.4
Bkg -- 14 to 25 in	clay loam	moderately slow	1.7 to 2.1 in	7.4 to 8.4
Cg -- 25 to 60 in	loam	moderately slow	5.9 to 6.6 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

971--Roliss complex

Roliss

Extent: 70 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: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 11 in	loam	moderate	1.9 to 2.6 in	6.6 to 8.4
Bg -- 11 to 16 in	loam	moderate	0.8 to 1.0 in	7.4 to 8.4
Cg -- 16 to 60 in	clay loam	moderate	6.6 to 8.3 in	7.4 to 8.4

Parnell

Extent: 20 percent of the unit
Landform(s): depressions on till plains
Slope gradient: 0 to 1 percent
Parent material: local colluvium and loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 7
Wind erodibility index (WEI): 38
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: C/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	silty clay loam	moderately slow	3.4 to 4.2 in	6.1 to 7.8
Btg -- 19 to 41 in	silty clay	slow	2.9 to 4.2 in	6.1 to 7.8
Cg -- 41 to 60 in	silty clay loam	slow	2.1 to 3.6 in	6.6 to 8.4

[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]

972--Roliss-Vallers complex

Roliss

Extent: 50 percent of the unit
Landform(s): flats on lake plains, swales on lake plains
Slope gradient: 0 to 1 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 11 in	loam	moderate	1.9 to 2.6 in	6.6 to 8.4
Bg -- 11 to 16 in	loam	moderate	0.8 to 1.0 in	7.4 to 8.4
Cg -- 16 to 60 in	clay loam	moderate	6.6 to 8.3 in	7.4 to 8.4

Vallers

Extent: 40 percent of the unit
Landform(s): rims on depressions on till-floored lake plains, flats on till-floored lake plains
Slope gradient: 0 to 2 percent
Parent material: loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 14 in	clay loam	moderately slow	2.6 to 3.1 in	7.4 to 8.4
Bkg -- 14 to 25 in	clay loam	moderately slow	1.7 to 2.1 in	7.4 to 8.4
Cg -- 25 to 60 in	loam	moderately slow	5.9 to 6.6 in	7.4 to 8.4

Map Unit Description (MN)

Grant 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]

1002--Alluvial land, frequently flooded

Alluvial land, frequently flooded

Extent: 100 percent of the unit
Landform(s): flats on flood plains, swales on flood plains
Slope gradient: 0 to 2 percent
Parent material: alluvium
Restrictive feature(s):
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:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

1032--Lake beaches

Beaches, lake

Extent: 100 percent of the unit
Landform(s): hillslopes on beaches
Slope gradient: 0 to 2 percent
Parent material: sandy and loamy lake beach deposits
Restrictive feature(s):
Flooding:
Ponding:
Drainage class: poorly drained

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

Map Unit Description (MN)

Grant County, Minnesota

[Data apply to the entire extent of the map unit within the survey area. Map unit and soil properties for a specific parcel of land may vary somewhat and should be determined by onsite investigation]

1053--Marsh

Marsh

Extent: 100 percent of the unit
Landform(s): depressions
Slope gradient: 0 to 1 percent
Parent material: lacustrine deposits or glacial till
Restrictive feature(s):
Flooding: none
Ponding: frequent
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil: yes
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

GP--Gravel pit

Pits, gravel

Extent: 100 percent of the unit
Landform(s): beach plains, moraines, outwash plains
Slope gradient:
Parent material: gravelly and sandy outwash deposits
Restrictive feature(s):
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil:
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

Map Unit Description (MN)

Grant 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]

V58--Kittson fine sandy loam, gray subsoil variant

Kittson, gray subsoil variant

Extent: 85 percent of the unit
Landform(s): flats on till-floored lake plains, swales on till-floored lake plains
Slope gradient: 0 to 2 percent
Parent material: glaciolacustrine deposits over loamy glacial till
Restrictive feature(s):
Flooding: none
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 3w
Hydric soil: yes
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	fine sandy loam	moderately rapid	1.5 to 1.8 in	6.6 to 7.8
Bg -- 10 to 21 in	fine sandy loam	moderately rapid	1.7 to 2.0 in	6.6 to 7.8
2Cg -- 21 to 60 in	clay loam	moderately slow	5.5 to 6.2 in	7.4 to 8.4

W--Water

Water

Extent: 100 percent of the unit
Landform(s):
Slope gradient:
Parent material:
Restrictive feature(s):
Flooding:
Ponding:
Drainage class:

Soil loss tolerance (T factor):
Wind erodibility group (WEG):
Wind erodibility index (WEI):
Kw factor (surface layer)
Land capability, nonirrigated:
Hydric soil:
Hydrologic group:
Potential for frost action:

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*