Map Unit Description (MN)

Goodhue 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]

1003--Udorthents, loamy (cut and fill land)

Udorthents, loamy

Extent: 100 percent of the unit
Landform(s): till plains
Slope gradient: 0 to 6 percent
Parent material: silty, loamy or clayey material
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class: well drained

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

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

1007--Udorthents, shallow (sanitary landfill)

Udorthents, shallow

Extent: 100 percent of the unit
Landform(s): till plains
Slope gradient: 0 to 25 percent
Parent material: variable material
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class: well drained

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

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

1010--Pits, quarry

Pits, quarry

Extent: 100 percent of the unit
Landform(s): hills, valley sides
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: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	*Permeability*	*Available water capacity*	*pH*

1027A--Coland-Spillville complex, 0 to 2 percent slopes, flooded

Coland, frequently flooded

Extent: 20 to 80 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 5w
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 32 in	silty clay loam	moderate	6.70 to 7.33 in	6.1 to 7.3
AB -- 32 to 40 in	clay loam	moderate	1.24 to 1.57 in	6.1 to 7.3
Bg1 -- 40 to 44 in	sandy loam	moderately rapid	0.43 to 0.67 in	6.1 to 7.3
Bg2 -- 44 to 52 in	loam	moderate	0.94 to 1.50 in	5.6 to 7.3
Cg -- 52 to 60 in	sandy loam	moderately rapid	0.87 to 1.34 in	6.1 to 7.3

Spillville, occasionally flooded

Extent: 20 to 60 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: loamy alluvium
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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 54 in	loam	moderate	10.79 to 11.87 in	5.6 to 7.3
C -- 54 to 80 in	loam	moderate	3.12 to 4.94 in	5.6 to 7.3

1033A--Spillville loam, 0 to 2 percent slopes, occasionally flooded

Spillville, occasionally flooded

Extent: 60 to 90 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: loamy 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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 54 in	loam	moderate	10.79 to 11.87 in	5.6 to 7.3
C -- 54 to 80 in	loam	moderate	3.12 to 4.94 in	5.6 to 7.3

1036A--Udipsamments, 0 to 2 percent slopes, frequently flooded

Udipsamments, frequently flooded

Extent: 30 to 80 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: sandy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer)
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: A
Potential for frost action:

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

1038--Udorthents, earthen dam

Udorthents, earthen dam

Extent: 100 percent of the unit
Landform(s): valleys
Slope gradient: 20 to 50 percent
Parent material: loamy material
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class: well drained

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

Representative soil profile:

Texture	Permeability	Available water capacity	pH

1051C--Udorthents, loamy (abandoned clay pits), 2 to 45 percent slopes

Udorthents, loamy

Extent: 90 to 100 percent of the unit
Landform(s): till plains
Slope gradient: 2 to 45 percent
Parent material: clayey material
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
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)
Land capability, nonirrigated:
Hydric soil:
Hydrologic group: C
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

GP--Pits, gravel-Udipsamments complex

Pits, gravel

Extent: 45 to 55 percent of the unit
Landform(s): stream terraces, outwash plains, eskers, moraines
Slope gradient: 0 to 50 percent
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: no
Hydrologic group:
Potential for frost action:

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

Udipsamments

Extent: 40 to 50 percent of the unit
Landform(s): stream terraces, outwash plains, eskers, moraines
Slope gradient: 0 to 25 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class: excessively drained

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

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

L171A--Merton silt loam, 1 to 3 percent slopes

Merton

Extent: 65 to 95 percent of the unit
Landform(s): rises on ground moraines
Slope gradient: 1 to 3 percent
Parent material: silty sediments over loamy 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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
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 16 in	silt loam	moderate	3.55 to 3.87 in	5.6 to 7.3
Bw -- 16 to 23 in	silt loam	moderate	1.14 to 1.47 in	5.6 to 7.3
2Bw -- 23 to 36 in	loam	moderate	2.21 to 2.47 in	5.6 to 7.3
2BC -- 36 to 48 in	loam	moderate	2.07 to 2.32 in	5.6 to 7.3
2C -- 48 to 60 in	loam	moderate	2.01 to 2.24 in	7.4 to 8.4

L177B--Moland silt loam, 2 to 6 percent slopes

Moland

Extent: 80 to 95 percent of the unit
Landform(s): ground moraines
Slope gradient: 2 to 6 percent
Parent material: silty sediments over loamy 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) .32
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 14 in	silt loam	moderate	3.12 to 3.40 in	5.6 to 7.3
Bw -- 14 to 20 in	silt loam	moderate	1.00 to 1.30 in	5.6 to 6.5
2Bw -- 20 to 49 in	loam	moderate	4.89 to 5.46 in	5.6 to 7.3
2C -- 49 to 80 in	loam	moderate	5.29 to 5.91 in	7.4 to 8.4

L180A--Maxcreek silty clay loam, 0 to 2 percent slopes

Maxcreek

Extent: 70 to 95 percent of the unit
Landform(s): flats on ground moraines, swales on ground moraines
Slope gradient: 0 to 2 percent
Parent material: silty sediments over loamy 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: 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 13 in	silty clay loam	moderate	2.73 to 2.99 in	6.1 to 7.3
AB -- 13 to 21 in	silty clay loam	moderate	1.42 to 1.73 in	6.1 to 7.3
Bg -- 21 to 30 in	silty clay loam	moderate	1.63 to 1.99 in	6.6 to 7.8
2Bg -- 30 to 41 in	loam	moderate	1.87 to 2.09 in	7.4 to 8.4
2Cg -- 41 to 60 in	loam	moderate	3.21 to 3.59 in	7.4 to 8.4

M505A--Klinger silt loam, 1 to 3 percent slopes

Klinger

Extent: 75 to 95 percent of the unit
Landform(s): rises on till plains
Slope gradient: 1 to 3 percent
Parent material: loess over loamy 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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
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 13 in	silt loam	moderate	2.86 to 3.12 in	5.1 to 7.3
AB -- 13 to 19 in	silty clay loam	moderate	1.18 to 1.30 in	5.1 to 7.3
Bg -- 19 to 31 in	silty clay loam	moderate	2.20 to 2.69 in	5.1 to 6.5
2Bg -- 31 to 40 in	loam	moderate	1.45 to 1.72 in	5.1 to 7.8
2BCg -- 40 to 46 in	loam	moderately slow	0.94 to 1.12 in	6.1 to 7.8
2BC -- 46 to 60 in	loam	moderately slow	2.34 to 2.62 in	6.1 to 8.3

M506B--Kasson silt loam, 1 to 6 percent slopes

Kasson

Extent: 80 to 95 percent of the unit
Landform(s): till plains
Slope gradient: 1 to 6 percent
Parent material: silty sediments over loamy 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) .32
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 6.5
BE -- 8 to 11 in	silt loam	moderate	0.63 to 0.69 in	5.1 to 6.5
Bt -- 11 to 20 in	loam	moderate	1.54 to 1.99 in	5.1 to 6.0
2Bt -- 20 to 53 in	loam	moderate	5.62 to 6.28 in	5.1 to 7.3
2BC -- 53 to 80 in	loam	moderately slow	4.55 to 5.09 in	6.1 to 8.3

M507A--Marquis silt loam, 1 to 3 percent slopes

Marquis

Extent: 80 to 95 percent of the unit
Landform(s): till plains
Slope gradient: 1 to 3 percent
Parent material: silty sediments over loamy 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) .32
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,AB -- 0 to 16 in	silt loam	moderate	3.55 to 3.87 in	6.1 to 7.3
Bw -- 16 to 24 in	silt loam	moderate	1.34 to 1.73 in	6.1 to 7.3
2Bw -- 24 to 48 in	loam	moderate	4.08 to 4.56 in	5.1 to 7.3
2BC -- 48 to 80 in	loam	moderately slow	5.42 to 6.06 in	6.1 to 8.3

M507B--Marquis silt loam, 2 to 6 percent slopes

Marquis

Extent: 75 to 98 percent of the unit
Landform(s): till plains
Slope gradient: 2 to 6 percent
Parent material: silty sediments over loamy 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) .32
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,AB -- 0 to 16 in	silt loam	moderate	3.55 to 3.87 in	6.1 to 7.3
Bw -- 16 to 24 in	silt loam	moderate	1.34 to 1.73 in	6.1 to 7.3
2Bw -- 24 to 48 in	loam	moderate	4.08 to 4.56 in	5.1 to 7.3
2BC -- 48 to 80 in	loam	moderately slow	5.42 to 6.06 in	6.1 to 8.3

M508A--Oran silt loam, 1 to 3 percent slopes

Oran

Extent: 80 to 95 percent of the unit
Landform(s): till plains
Slope gradient: 1 to 3 percent
Parent material: silty sediments over loamy 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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E -- 8 to 14 in	silt loam	moderate	1.26 to 1.39 in	5.1 to 7.3
BE -- 14 to 21 in	silt loam	moderate	1.14 to 1.47 in	5.1 to 7.3
2Bt -- 21 to 48 in	loam	moderate	4.62 to 5.16 in	5.1 to 7.3
2BC -- 48 to 60 in	loam	moderately slow	2.01 to 2.24 in	6.1 to 8.3

M509A--Mantorville loam, 0 to 2 percent slopes

Mantorville

Extent: 70 to 90 percent of the unit
Landform(s): terraces, till plains
Slope gradient: 0 to 2 percent
Parent material: loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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*
A,AB -- 0 to 15 in	loam	moderate	2.99 to 3.29 in	6.1 to 7.3
Bt -- 15 to 26 in	loam	moderate	1.76 to 2.09 in	6.1 to 7.3
2Bt -- 26 to 30 in	sandy loam	moderately rapid	0.31 to 0.55 in	5.6 to 6.5
2Bw -- 30 to 48 in	sand	very rapid	0.36 to 1.81 in	5.6 to 6.5
2E&Bt -- 48 to 80 in	stratified sand to loamy sand	rapid	1.28 to 3.19 in	5.6 to 6.5

M509B--Mantorville loam, 2 to 6 percent slopes

Mantorville

Extent: 75 to 90 percent of the unit
Landform(s): till plains
Slope gradient: 2 to 6 percent
Parent material: loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A,AB -- 0 to 15 in	loam	moderate	2.99 to 3.29 in	6.1 to 7.3
Bt -- 15 to 26 in	loam	moderate	1.76 to 2.09 in	6.1 to 7.3
2Bt -- 26 to 30 in	sandy loam	moderately rapid	0.31 to 0.55 in	5.6 to 6.5
2Bw -- 30 to 48 in	sand	very rapid	0.36 to 1.81 in	5.6 to 6.5
2E&Bt -- 48 to 80 in	stratified sand to loamy sand	rapid	1.28 to 3.19 in	5.6 to 6.5

M509C2--Mantorville loam, 6 to 12 percent slopes, moderately eroded

Mantorville, moderately eroded

Extent: 65 to 90 percent of the unit
Landform(s): till plains
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
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

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
A,AB	0 to 15 in	loam	moderate	2.99 to 3.29 in	6.1 to 7.3
Bt	15 to 26 in	loam	moderate	1.76 to 2.09 in	6.1 to 7.3
2Bt	26 to 30 in	sandy loam	moderately rapid	0.31 to 0.55 in	5.6 to 6.5
2Bw	30 to 48 in	sand	very rapid	0.36 to 1.81 in	5.6 to 6.5
2E&Bt	48 to 80 in	stratified sand to loamy sand	rapid	1.28 to 3.19 in	5.6 to 6.5

M510A--Maxfield silty clay loam, 0 to 2 percent slopes

Maxfield

Extent: 85 to 98 percent of the unit
Landform(s): flats on till plains
Slope gradient: 0 to 2 percent
Parent material: loess over loamy 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: 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 19 in	silty clay loam	moderate	3.97 to 4.35 in	5.1 to 7.3
Bg1 -- 19 to 29 in	silty clay loam	moderate	1.84 to 2.05 in	5.1 to 7.3
2Bw -- 29 to 55 in	loam	moderate	4.16 to 4.94 in	5.1 to 6.5
2BC -- 55 to 80 in	loam	moderately slow	4.22 to 4.71 in	6.1 to 8.3

M511A--Readlyn silt loam, 1 to 3 percent slopes

Readlyn

Extent: 90 to 98 percent of the unit
Landform(s): till plains
Slope gradient: 1 to 3 percent
Parent material: silty sediments over loamy 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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
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 17 in	silt loam	moderate	3.72 to 4.06 in	5.1 to 7.3
Bw -- 17 to 22 in	silt loam	moderate	0.87 to 1.13 in	6.1 to 7.3
2Bw -- 22 to 47 in	loam	moderate	3.97 to 4.71 in	5.1 to 7.3
2BC -- 47 to 60 in	loam	moderately slow	2.21 to 2.47 in	6.1 to 8.3

M516C2--Wangs-Wagen Prairie complex, 6 to 12 percent slopes, moderately eroded

Wangs, moderately eroded

Extent: 20 to 70 percent of the unit
Landform(s): valley sides
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 6 to 20 inches
Flooding: none
Ponding: none
Drainage class: well drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	silty clay loam	moderately slow	2.31 to 2.54 in	6.6 to 8.4
2BC -- 11 to 16 in	clay	slow	0.41 to 0.61 in	7.4 to 8.4
2Cr -- 16 to 60 in	weathered bedrock	slow		

Wagen Prairie, moderately eroded

Extent: 20 to 60 percent of the unit
Landform(s): valley sides
Slope gradient: 6 to 12 percent
Parent material: silty sediments over loamy till over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .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*
A -- 0 to 10 in	silt loam	moderate	2.17 to 2.36 in	5.6 to 7.3
Bt -- 10 to 26 in	silt loam	moderate	2.74 to 3.55 in	5.1 to 6.5
2BC -- 26 to 37 in	clay loam	moderate	1.54 to 2.09 in	6.1 to 8.3
3Cr -- 37 to 60 in	weathered bedrock	slow		

M516D2--Wangs-Wagen Prairie complex, 12 to 18 percent slopes, moderately eroded

Wangs, moderately eroded

Extent: 20 to 70 percent of the unit
Landform(s): valley sides
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 6 to 20 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	silty clay loam	moderately slow	2.31 to 2.54 in	6.6 to 8.4
2BC -- 11 to 16 in	clay	slow	0.41 to 0.61 in	7.4 to 8.4
2Cr -- 16 to 60 in	weathered bedrock	slow		

Wagen Prairie, moderately eroded

Extent: 20 to 60 percent of the unit
Landform(s): valley sides
Slope gradient: 12 to 18 percent
Parent material: silty sediments over loamy till over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .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*
A -- 0 to 10 in	silt loam	moderate	2.17 to 2.36 in	5.6 to 7.3
Bt -- 10 to 26 in	silt loam	moderate	2.74 to 3.55 in	5.1 to 6.5
2BC -- 26 to 37 in	clay loam	moderate	1.54 to 2.09 in	6.1 to 8.3
3Cr -- 37 to 60 in	weathered bedrock	slow		

M516E--Wangs-Wagen Prairie complex, 18 to 35 percent slopes

Wangs

Extent: 55 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loamy sediments over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 6 to 20 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 4L
Wind erodibility index (WEI): 86
Kw factor (surface layer) .32
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 11 in	silty clay loam	moderately slow	2.31 to 2.54 in	6.6 to 8.4
2BC -- 11 to 16 in	clay	slow	0.41 to 0.61 in	7.4 to 8.4
2Cr -- 16 to 60 in	weathered bedrock	slow		

Wagen Prairie

Extent: 15 to 25 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: silty sediments over loamy till over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .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*
A -- 0 to 10 in	silt loam	moderate	2.17 to 2.36 in	5.6 to 7.3
Bt -- 10 to 26 in	silt loam	moderate	2.74 to 3.55 in	5.1 to 6.5
2BC -- 26 to 37 in	clay loam	moderate	1.54 to 2.09 in	6.1 to 8.3
3Cr -- 37 to 60 in	weathered bedrock	slow		

M518B--Clyde-Floyd complex, 1 to 4 percent slopes

Clyde

Extent: 40 to 80 percent of the unit
Landform(s): drainageways on till plains
Slope gradient: 1 to 3 percent
Parent material: loamy sediments over loamy 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: 2w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A,AB -- 0 to 23 in	silty clay loam	moderate	4.80 to 5.25 in	6.1 to 7.3
Bg1 -- 23 to 41 in	silty clay loam	moderate	3.26 to 3.62 in	5.1 to 7.3
Bg2 -- 41 to 44 in	sandy loam	moderate	0.35 to 0.60 in	6.1 to 7.3
BCg -- 44 to 60 in	loam	moderately slow	2.68 to 2.99 in	6.6 to 8.3

Floyd

Extent: 20 to 55 percent of the unit
Landform(s): till plains
Slope gradient: 1 to 4 percent
Parent material: silty sediments over loamy 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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
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 17 in	silt loam	moderate	3.72 to 4.06 in	6.1 to 7.3
Bw -- 17 to 39 in	sandy clay loam	moderate	3.53 to 4.19 in	6.1 to 7.3
2Bw -- 39 to 49 in	loam	moderate	1.57 to 1.87 in	6.6 to 7.8
2BC -- 49 to 60 in	loam	moderately slow	1.87 to 2.09 in	6.6 to 8.3

M520B--Rasset sandy loam, 0 to 6 percent slopes

Rasset

Extent: 75 to 95 percent of the unit
Landform(s): outwash plains, valley trains
Slope gradient: 0 to 6 percent
Parent material: loamy sediments over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
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,A -- 0 to 15 in	sandy loam	moderately rapid	1.80 to 2.09 in	5.1 to 7.3
Bt -- 15 to 28 in	sandy loam	moderately rapid	1.56 to 2.47 in	5.1 to 7.3
2BC -- 28 to 36 in	loamy sand	rapid	0.39 to 0.79 in	5.1 to 6.5
2C1 -- 36 to 60 in	sand	very rapid	0.48 to 1.68 in	5.1 to 6.5
2C2 -- 60 to 80 in	sand	very rapid	0.40 to 1.41 in	6.1 to 7.8

M520C2--Rasset sandy loam, 6 to 12 percent slopes, moderately eroded

Rasset, moderately eroded

Extent: 70 to 90 percent of the unit
Landform(s): outwash plains, terraces
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
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,A -- 0 to 15 in	sandy loam	moderately rapid	1.80 to 2.09 in	5.1 to 7.3
Bt -- 15 to 28 in	sandy loam	moderately rapid	1.56 to 2.47 in	5.1 to 7.3
2BC -- 28 to 36 in	loamy sand	rapid	0.39 to 0.79 in	5.1 to 6.5
2C1 -- 36 to 60 in	sand	very rapid	0.48 to 1.68 in	5.1 to 6.5
2C2 -- 60 to 80 in	sand	very rapid	0.40 to 1.41 in	6.1 to 7.8

M521C2--Kenyon silt loam, 6 to 12 percent slopes, moderately eroded

Kenyon, moderately eroded

Extent: 75 to 100 percent of the unit
Landform(s): till plains
Slope gradient: 6 to 12 percent
Parent material: silty sediments over loamy 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) .37
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,A -- 0 to 16 in	silt loam	moderate	3.55 to 3.87 in	5.6 to 7.3
Bw -- 16 to 24 in	silt loam	moderate	1.34 to 1.73 in	5.6 to 6.5
2Bw -- 24 to 48 in	loam	moderate	4.08 to 4.56 in	5.1 to 6.0
2BC -- 48 to 60 in	loam	moderately slow	2.01 to 2.24 in	6.1 to 8.3

M522D2--Bassett-Racine complex, 12 to 18 percent slopes, moderately eroded

Bassett, moderately eroded

Extent: 30 to 70 percent of the unit
Landform(s): till plains
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over loamy 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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	5.1 to 7.3
Bt -- 9 to 30 in	loam	moderate	3.55 to 4.17 in	4.5 to 6.5
2Bt -- 30 to 54 in	loam	moderate	3.84 to 4.56 in	5.1 to 6.5
2BC -- 54 to 80 in	loam	moderately slow	4.42 to 4.94 in	6.1 to 8.3

Racine, moderately eroded

Extent: 30 to 60 percent of the unit
Landform(s): till plains
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over loamy 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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loam	moderate	1.57 to 1.73 in	5.1 to 7.3
E -- 8 to 12 in	loam	moderate	0.67 to 0.75 in	5.1 to 7.3
Bt -- 12 to 18 in	clay loam	moderate	0.94 to 1.20 in	5.1 to 7.3
2Bt -- 18 to 46 in	sandy clay loam	moderate	4.19 to 5.31 in	5.1 to 7.3
2BC -- 46 to 60 in	loam	moderately slow	2.34 to 2.62 in	6.1 to 8.3

M522E--Bassett-Racine complex, 18 to 25 percent slopes

Bassett

Extent: 30 to 70 percent of the unit
Landform(s): till plains
Slope gradient: 18 to 22 percent
Parent material: loamy sediments over loamy 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: 6e
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	loam	moderate	1.81 to 1.99 in	5.1 to 7.3
Bt -- 9 to 30 in	loam	moderate	3.55 to 4.17 in	4.5 to 6.5
2Bt -- 30 to 54 in	loam	moderate	3.84 to 4.56 in	5.1 to 6.5
2BC -- 54 to 80 in	loam	moderately slow	4.42 to 4.94 in	6.1 to 8.3

Racine

Extent: 30 to 60 percent of the unit
Landform(s): till plains
Slope gradient: 18 to 25 percent
Parent material: loamy sediments over loamy 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: 6e
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	1.57 to 1.73 in	5.1 to 7.3
E -- 8 to 12 in	loam	moderate	0.67 to 0.75 in	5.1 to 7.3
Bt -- 12 to 18 in	clay loam	moderate	0.94 to 1.20 in	5.1 to 7.3
2Bt -- 18 to 46 in	sandy clay loam	moderate	4.19 to 5.31 in	5.1 to 7.3
2BC -- 46 to 60 in	loam	moderately slow	2.34 to 2.62 in	6.1 to 8.3

M523C2--Bassett-Kasson complex, 6 to 12 percent slopes, moderately eroded

Bassett, moderately eroded

Extent: 35 to 70 percent of the unit
Landform(s): till plains
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over loamy 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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	loam	moderate	1.81 to 1.99 in	5.1 to 7.3
Bt -- 9 to 30 in	loam	moderate	3.55 to 4.17 in	4.5 to 6.5
2Bt -- 30 to 54 in	loam	moderate	3.84 to 4.56 in	5.1 to 6.5
2BC -- 54 to 80 in	loam	moderately slow	4.42 to 4.94 in	6.1 to 8.3

Kasson, moderately eroded

Extent: 25 to 50 percent of the unit
Landform(s): till plains
Slope gradient: 6 to 9 percent
Parent material: silty sediments over loamy 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) .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 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 6.5
BE -- 8 to 11 in	silt loam	moderate	0.63 to 0.69 in	5.1 to 6.5
Bt -- 11 to 20 in	loam	moderate	1.63 to 1.99 in	5.1 to 6.0
2Bt -- 20 to 53 in	loam	moderate	5.62 to 6.28 in	5.1 to 7.3
2BC -- 53 to 80 in	loam	moderately slow	4.55 to 5.09 in	6.1 to 8.3

M525A--Dakota silt loam, 0 to 3 percent slopes

Dakota

Extent: 80 to 100 percent of the unit
Landform(s): stream terraces
Slope gradient: 0 to 3 percent
Parent material: silty sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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,AB -- 0 to 13 in	silt loam	moderate	2.86 to 3.12 in	5.1 to 7.3
Bt -- 13 to 35 in	silt loam	moderate	3.75 to 4.85 in	5.1 to 6.5
2Bt -- 35 to 38 in	loamy sand	rapid	0.25 to 0.31 in	5.1 to 6.5
2C -- 38 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.43 to 1.52 in	5.1 to 6.5

M526B--Winneshiek silt loam, 2 to 6 percent slopes

Winneshiek

Extent: 70 to 90 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	rapid		

M526C2--Winneshiek silt loam, 6 to 12 percent slopes, moderately eroded

Winneshiek, moderately eroded

Extent: 60 to 90 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	rapid		

M527D2--Nasset-Winneshiek complex, 12 to 18 percent slopes, moderately eroded

Nasset, moderately eroded

Extent: 20 to 80 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silt loam	moderate	4.54 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 1.13 in	5.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	rapid		

Winneshiek, moderately eroded

Extent: 20 to 50 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	rapid		

M532A--Maxfield silty clay loam, 0 to 2 percent slopes, occasionally flooded

Maxfield, occasionally flooded

Extent: 60 to 85 percent of the unit
Landform(s): drainageways
Slope gradient: 0 to 2 percent
Parent material: loess over loamy till
Restrictive feature(s): greater than 60 inches
Flooding: occasional
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw 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 19 in	silty clay loam	moderate	3.97 to 4.35 in	5.1 to 7.3
Bg1 -- 19 to 29 in	silty clay loam	moderate	1.84 to 2.05 in	5.1 to 7.3
2Bw -- 29 to 55 in	loam	moderate	4.16 to 4.94 in	5.1 to 6.5
2BC -- 55 to 80 in	loam	moderately slow	3.97 to 4.71 in	6.1 to 8.3

M534B--Estherville-Ridgeport complex, 0 to 6 percent slopes

Estherville

Extent: 50 to 70 percent of the unit
Landform(s): rises on terraces, valley trains
Slope gradient: 0 to 6 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	sandy loam	moderately rapid	1.56 to 1.95 in	5.6 to 7.3
Bw -- 13 to 18 in	sandy loam	moderately rapid	0.56 to 0.97 in	5.6 to 7.3
2Bw -- 18 to 23 in	loamy coarse sand	very rapid	0.09 to 0.33 in	5.6 to 7.3
2C -- 23 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.74 to 2.59 in	7.4 to 8.4

Ridgeport

Extent: 30 to 40 percent of the unit
Landform(s): swales on terraces, valley trains
Slope gradient: 0 to 6 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .20
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 13 in	loam	moderate	2.60 to 2.86 in	5.6 to 7.3
BA -- 13 to 19 in	sandy loam	moderately rapid	0.65 to 0.83 in	5.6 to 7.3
Bw -- 19 to 36 in	sandy loam	moderately rapid	1.86 to 2.20 in	5.6 to 7.3
2BC -- 36 to 39 in	gravelly sandy loam	rapid	0.16 to 0.35 in	5.6 to 7.3
2C -- 39 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.42 to 2.09 in	7.4 to 8.4

M534B--Estherville-Ridgeport complex, 0 to 6 percent slopes

M535B--Wagen Prairie silt loam, 2 to 6 percent slopes

Wagen Prairie

Extent: 65 to 90 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: silty sediments over loamy till over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 10 in	silt loam	moderate	2.17 to 2.36 in	5.6 to 7.3
Bt -- 10 to 26 in	silt loam	moderate	2.74 to 3.55 in	5.1 to 6.5
2BC -- 26 to 37 in	clay loam	moderate	1.54 to 2.09 in	6.1 to 8.3
3Cr -- 37 to 60 in	weathered bedrock	slow		

M536C2--Meridian, till substratum-Bassett complex, 6 to 12 percent slopes, moderately eroded

Meridian, till substratum, moderately eroded

Extent: 20 to 75 percent of the unit
Landform(s): till plains
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over sandy and gravelly outwash over loamy till
Restrictive feature(s): greater than 60 inches
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) .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 7 in	silt loam	moderate	1.56 to 1.70 in	5.1 to 7.3
Bt1 --	7 to 26 in	loam	moderate	3.21 to 4.16 in	5.1 to 6.5
2Bt --	26 to 63 in	loamy sand	rapid	0.74 to 3.70 in	5.1 to 6.5
3BC --	63 to 80 in	loam	moderately slow	2.88 to 3.22 in	6.1 to 8.3

Bassett, moderately eroded

Extent: 15 to 65 percent of the unit
Landform(s): till plains
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over loamy 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) .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 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 6.5
Bt --	9 to 30 in	loam	moderate	3.55 to 4.17 in	4.5 to 6.5
2Bt --	30 to 54 in	loam	moderate	3.84 to 4.56 in	5.1 to 6.5
2BC --	54 to 80 in	loam	moderately slow	4.42 to 4.94 in	6.1 to 8.3

M536D2--Meridian, till substratum-Bassett complex, 12 to 18 percent slopes, moderately eroded

Meridian, till substratum, moderately eroded

Extent: 20 to 70 percent of the unit
Landform(s): till plains
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over sandy and gravelly outwash over loamy till
Restrictive feature(s): greater than 60 inches
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) .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 7 in	silt loam	moderate	1.56 to 1.70 in	5.1 to 7.3
Bt1 --	7 to 26 in	loam	moderate	3.21 to 4.16 in	5.1 to 6.5
2Bt --	26 to 63 in	loamy sand	rapid	0.74 to 3.70 in	5.1 to 6.5
3BC --	63 to 80 in	loam	moderately slow	2.88 to 3.22 in	6.1 to 8.3

Bassett, moderately eroded

Extent: 15 to 65 percent of the unit
Landform(s): till plains
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over loamy 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) .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 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 6.5
Bt --	9 to 30 in	loam	moderate	3.55 to 4.17 in	4.5 to 6.5
2Bt --	30 to 54 in	loam	moderate	3.84 to 4.56 in	5.1 to 6.5
2BC --	54 to 80 in	loam	moderately slow	4.42 to 4.94 in	6.1 to 8.3

M537E--Meridian-Bassett complex, 18 to 35 percent slopes

Meridian

Extent: 15 to 80 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
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) .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 9 in	silt loam	moderate	1.99 to 2.17 in	5.1 to 7.3
Bt1 -- 9 to 28 in	silt loam	moderate	3.21 to 4.16 in	5.1 to 7.3
Bt2 -- 28 to 32 in	sandy loam	moderately rapid	0.47 to 0.75 in	5.1 to 6.5
2BC -- 32 to 41 in	loamy coarse sand	very rapid	0.18 to 0.91 in	5.1 to 6.5
2C -- 41 to 72 in	stratified gravelly coarse sand to sand	very rapid	0.62 to 2.18 in	5.1 to 6.5

Bassett

Extent: 15 to 80 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loamy sediments over loamy 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) .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 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 6.5
Bt -- 9 to 30 in	loam	moderate	3.55 to 4.17 in	4.5 to 6.5
2Bt -- 30 to 54 in	loam	moderate	3.84 to 4.56 in	5.1 to 6.5
2BC -- 54 to 80 in	loam	moderately slow	4.42 to 4.94 in	6.1 to 8.3

M538A--Waukegan silt loam, 0 to 2 percent slopes

Waukegan

Extent: 90 to 100 percent of the unit
Landform(s): outwash plains
Slope gradient: 0 to 2 percent
Parent material: silty sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
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) .32
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 12 in	silt loam	moderate	2.60 to 2.83 in	5.6 to 7.3
Bw -- 12 to 33 in	silt loam	moderate	4.25 to 4.68 in	5.1 to 7.3
2BC -- 33 to 52 in	gravelly coarse sand	very rapid	0.38 to 1.89 in	5.6 to 7.3
2C -- 52 to 80 in	stratified gravelly coarse sand to sand	very rapid	0.56 to 1.96 in	6.1 to 7.8

M539F--Bellechester loamy sand, 18 to 45 percent slopes

Bellechester

Extent: 25 to 75 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 45 percent
Parent material: sandy colluvium and/or residuum
Restrictive feature(s): paralithic bedrock at 40 to 60 inche
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .15
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 16 in	loamy sand	rapid	1.29 to 1.78 in	6.1 to 7.8
BA,Bw,BC -- 16 to 42 in	fine sand	rapid	1.04 to 2.60 in	5.6 to 7.8
Cr -- 42 to 60 in	weathered bedrock	moderate		

M540F--Frontenac-Bellechester complex, 18 to 45 percent slopes

Frontenac

Extent: 25 to 75 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 45 percent
Parent material: loamy sediments over loamy-sketal colluvium
Restrictive feature(s): greater than 60 inches
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) .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,AB -- 0 to 12 in	silt loam	moderate	2.60 to 2.83 in	5.6 to 7.3
Bw -- 12 to 30 in	silt loam	moderate	3.08 to 3.98 in	5.6 to 7.3
2C -- 30 to 80 in	very channery loam	moderately rapid	3.00 to 7.00 in	6.6 to 7.8

Bellechester

Extent: 15 to 35 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 45 percent
Parent material: sandy colluvium and/or residuum
Restrictive feature(s): paralithic bedrock at 40 to 60 inche
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .15
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 16 in	loamy sand	rapid	1.29 to 1.78 in	6.1 to 7.8
BA,Bw,BC -- 16 to 42 in	fine sand	rapid	1.04 to 2.60 in	5.6 to 7.8
Cr -- 42 to 60 in	weathered bedrock	moderate		

M541C2--Copaston loam, 6 to 12 percent slopes, moderately eroded

Copaston, moderately eroded

Extent: 55 to 85 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over limestone bedrock
Restrictive feature(s): lithic bedrock at 10 to 20 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
AB -- 7 to 11 in	fine sandy loam	moderately rapid	0.59 to 0.75 in	5.6 to 7.3
Bw -- 11 to 18 in	sandy loam	moderately rapid	0.78 to 1.35 in	5.6 to 7.3
2R -- 18 to 60 in	unweathered bedrock	moderately slow		

M541D--Copaston loam, 12 to 18 percent slopes

Copaston

Extent: 55 to 85 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over limestone bedrock
Restrictive feature(s): lithic bedrock at 10 to 20 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 1
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: D
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
AB -- 7 to 11 in	fine sandy loam	moderately rapid	0.59 to 0.75 in	5.6 to 7.3
Bw -- 11 to 18 in	sandy loam	moderately rapid	0.78 to 1.35 in	5.6 to 7.3
2R -- 18 to 60 in	unweathered bedrock	moderately slow		

M-W--Water, miscellaneous

Water, miscellaneous

Extent: 100 percent of the unit
Landform(s):
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

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

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

N501B--Downs silt loam, 2 to 6 percent slopes

Downs

Extent: 85 to 99 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

N501C2--Downs silt loam, 6 to 12 percent slopes, moderately eroded

Downs, moderately eroded

Extent: 85 to 95 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

N501D2--Downs silt loam, 12 to 18 percent slopes, moderately eroded

Downs, moderately eroded

Extent: 85 to 95 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

N507B--Timula-Mt. Carroll complex, 2 to 6 percent slopes

Timula

Extent: 35 to 85 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	6.1 to 7.8
Bt -- 6 to 15 in	silt loam	moderate	1.63 to 1.81 in	6.1 to 7.8
Bw -- 15 to 28 in	silt loam	moderate	2.34 to 2.60 in	6.1 to 7.8
C -- 28 to 80 in	silt loam	moderate	9.35 to 10.39 in	7.4 to 8.4

Mt. Carroll

Extent: 15 to 65 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 24 in	silt loam	moderate	3.23 to 3.55 in	5.1 to 7.3
Bw -- 24 to 46 in	silt loam	moderate	4.41 to 4.85 in	5.6 to 7.8
BC -- 46 to 60 in	silt loam	moderate	2.48 to 2.76 in	7.4 to 8.4
C -- 60 to 80 in	silt loam	moderate	3.61 to 4.02 in	7.4 to 8.4

N507C2--Timula-Mt. Carroll complex, 6 to 12 percent slopes, moderately eroded

Timula, moderately eroded

Extent: 40 to 90 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	6.1 to 7.8
Bt -- 6 to 15 in	silt loam	moderate	1.63 to 1.81 in	6.1 to 7.8
Bw -- 15 to 28 in	silt loam	moderate	2.34 to 2.60 in	6.1 to 7.8
C -- 28 to 80 in	silt loam	moderate	9.35 to 10.39 in	7.4 to 8.4

Mt. Carroll, moderately eroded

Extent: 10 to 50 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 24 in	silt loam	moderate	3.23 to 3.55 in	5.1 to 7.3
Bw -- 24 to 46 in	silt loam	moderate	4.41 to 4.85 in	5.6 to 7.8
BC -- 46 to 60 in	silt loam	moderate	2.48 to 2.76 in	7.4 to 8.4
C -- 60 to 80 in	silt loam	moderate	3.61 to 4.02 in	7.4 to 8.4

N507D2--Timula-Mt. Carroll complex, 12 to 18 percent slopes, moderately eroded

Timula, moderately eroded

Extent: 40 to 85 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	6.1 to 7.8
Bt -- 6 to 15 in	silt loam	moderate	1.63 to 1.81 in	6.1 to 7.8
Bw -- 15 to 28 in	silt loam	moderate	2.34 to 2.60 in	6.1 to 7.8
C -- 28 to 80 in	silt loam	moderate	9.35 to 10.39 in	7.4 to 8.4

Mt. Carroll, moderately eroded

Extent: 15 to 40 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 24 in	silt loam	moderate	3.23 to 3.55 in	5.1 to 7.3
Bw -- 24 to 46 in	silt loam	moderate	4.41 to 4.85 in	5.6 to 7.8
BC -- 46 to 60 in	silt loam	moderate	2.48 to 2.76 in	7.4 to 8.4
C -- 60 to 80 in	silt loam	moderate	3.61 to 4.02 in	7.4 to 8.4

N507E--Timula-Mt. Carroll complex, 18 to 25 percent slopes

Timula

Extent: 30 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 18 to 25 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.18 to 1.42 in	6.1 to 7.8
Bt -- 6 to 15 in	silt loam	moderate	1.63 to 1.81 in	6.1 to 7.8
Bw -- 15 to 28 in	silt loam	moderate	2.34 to 2.60 in	6.1 to 7.8
C -- 28 to 80 in	silt loam	moderate	9.35 to 10.39 in	7.4 to 8.4

Mt. Carroll

Extent: 15 to 40 percent of the unit
Landform(s): loess hills
Slope gradient: 18 to 25 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 24 in	silt loam	moderate	3.23 to 3.55 in	5.1 to 7.3
Bw -- 24 to 46 in	silt loam	moderate	4.41 to 4.85 in	5.6 to 7.8
BC -- 46 to 60 in	silt loam	moderate	2.48 to 2.76 in	7.4 to 8.4
C -- 60 to 80 in	silt loam	moderate	3.61 to 4.02 in	7.4 to 8.4

N508E--Seaton silt loam, 18 to 25 percent slopes

Seaton

Extent: 35 to 95 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 25 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 4 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 7.3
E,BE -- 4 to 15 in	silt loam	moderate	2.20 to 2.43 in	5.6 to 7.3
Bt -- 15 to 44 in	silt loam	moderate	5.83 to 6.41 in	5.1 to 7.3
BC -- 44 to 70 in	silt loam	moderate	4.68 to 5.72 in	5.6 to 8.4
C -- 70 to 80 in	silt loam	moderate	1.77 to 1.97 in	7.4 to 8.4

N514B--Joy-Ossian, occasionally flooded, complex, 1 to 5 percent slopes

Joy

Extent: 30 to 75 percent of the unit
Landform(s): drainageways
Slope gradient: 2 to 5 percent
Parent material: loess
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): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
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 17 in	silt loam	moderate	3.72 to 4.06 in	5.6 to 7.3
Bt,Btg -- 17 to 49 in	silt loam	moderate	6.38 to 7.02 in	5.1 to 7.3
Cg -- 49 to 60 in	silt loam	moderate	1.87 to 2.43 in	6.1 to 8.4

Ossian, occasionally flooded

Extent: 15 to 40 percent of the unit
Landform(s): drainageways
Slope gradient: 1 to 3 percent
Parent material: silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: occasional
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw 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 15 in	silt loam	moderate	3.29 to 3.59 in	5.6 to 7.3
AB -- 15 to 23 in	silt loam	moderate	1.57 to 1.73 in	5.6 to 7.3
Bg -- 23 to 66 in	silt loam	moderate	8.66 to 9.53 in	5.6 to 7.3
BCg -- 66 to 80 in	silt loam	moderate	2.76 to 3.03 in	6.1 to 7.8

N517A--Oak Center-Mt. Carroll complex, 0 to 2 percent slopes

Oak Center

Extent: 25 to 85 percent of the unit
Landform(s): structural benches
Slope gradient: 0 to 2 percent
Parent material: loess over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 40 to 80 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 54 in	silt loam	moderate	8.98 to 9.87 in	5.1 to 7.3
2Bt -- 54 to 56 in	fine sandy loam	moderate	0.24 to 0.37 in	5.1 to 6.5
3C -- 56 to 62 in	fine sand	rapid	0.24 to 0.41 in	5.1 to 6.5
3Cr -- 62 to 80 in	weathered bedrock	moderate		

Mt. Carroll

Extent: 15 to 55 percent of the unit
Landform(s): structural benches
Slope gradient: 0 to 2 percent
Parent material: loess
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) .32
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 -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 17 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bt -- 17 to 55 in	silt loam	moderate	7.64 to 8.40 in	5.1 to 7.3
BC -- 55 to 62 in	silt loam	moderate	1.34 to 1.47 in	5.6 to 7.8
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	5.6 to 8.4

N518B--Lindstrom silt loam, 2 to 6 percent slopes

Lindstrom

Extent: 65 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 2 to 6 percent
Parent material: silty alluvium over colluvium
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: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 29 in	silt loam	moderate	6.41 to 6.99 in	5.6 to 7.3
Bw -- 29 to 60 in	silt loam	moderate	6.14 to 6.76 in	5.6 to 7.3
C -- 60 to 80 in	loam	moderate	3.41 to 4.42 in	6.6 to 7.8

N518C2--Lindstrom silt loam, 6 to 12 percent slopes, moderately eroded

Lindstrom, moderately eroded

Extent: 65 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 6 to 12 percent
Parent material: silty alluvium over colluvium
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: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 29 in	silt loam	moderate	6.41 to 6.99 in	5.6 to 7.3
Bw -- 29 to 60 in	silt loam	moderate	6.14 to 6.76 in	5.6 to 7.3
C -- 60 to 80 in	loam	moderate	3.41 to 4.42 in	6.6 to 7.8

N518D2--Lindstrom silt loam, 12 to 18 percent slopes, moderately eroded

Lindstrom, moderately eroded

Extent: 70 to 90 percent of the unit
Landform(s): valley sides
Slope gradient: 12 to 18 percent
Parent material: silty alluvium over colluvium
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: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 29 in	silt loam	moderate	6.41 to 6.99 in	5.6 to 7.3
Bw -- 29 to 60 in	silt loam	moderate	6.14 to 6.76 in	5.6 to 7.3
C -- 60 to 80 in	loam	moderate	3.41 to 4.42 in	6.6 to 7.8

N519B--Vasa silt loam, 1 to 4 percent slopes

Vasa

Extent: 65 to 90 percent of the unit
Landform(s): loess hills
Slope gradient: 1 to 4 percent
Parent material: loess over loamy 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) .32
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 -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 53 in	silt loam	moderate	8.82 to 9.70 in	5.1 to 7.3
2Bt -- 53 to 80 in	loam	moderate	4.55 to 5.09 in	5.1 to 7.3

N521B--Mt. Carroll silt loam, 2 to 6 percent slopes

Mt. Carroll

Extent: 90 to 100 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 36 in	silt loam	moderate	5.59 to 6.15 in	5.1 to 7.3
Bw -- 36 to 50 in	silt loam	moderate	2.83 to 3.12 in	5.6 to 7.8
BC -- 50 to 62 in	silt loam	moderate	2.13 to 2.36 in	7.4 to 8.4
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	7.4 to 8.4

N521C2--Mt. Carroll silt loam, 6 to 12 percent slopes, moderately eroded

Mt. Carroll, moderately eroded

Extent: 80 to 95 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 36 in	silt loam	moderate	5.59 to 6.15 in	5.1 to 7.3
Bw -- 36 to 50 in	silt loam	moderate	2.83 to 3.12 in	5.6 to 7.8
BC -- 50 to 62 in	silt loam	moderate	2.13 to 2.36 in	7.4 to 8.4
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	7.4 to 8.4

N521D2--Mt. Carroll silt loam, 12 to 18 percent slopes, moderately eroded

Mt. Carroll, moderately eroded

Extent: 75 to 100 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 36 in	silt loam	moderate	5.59 to 6.15 in	5.1 to 7.3
Bw -- 36 to 50 in	silt loam	moderate	2.83 to 3.12 in	5.6 to 7.8
BC -- 50 to 62 in	silt loam	moderate	2.13 to 2.36 in	7.4 to 8.4
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	7.4 to 8.4

N522A--Otter silt loam, channeled upland, 0 to 2 percent slopes, frequently flooded

Otter, channeled upland, frequently flooded

Extent: 70 to 95 percent of the unit
Landform(s): drainageways
Slope gradient: 0 to 2 percent
Parent material: silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 5w
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	silt loam	moderate	1.73 to 1.89 in	6.1 to 7.8
A -- 8 to 38 in	silt loam	moderate	5.69 to 7.18 in	6.1 to 7.8
Cg -- 38 to 60 in	silt loam	moderate	2.87 to 4.85 in	6.1 to 8.4

N526B--Gale-Oak Center complex, 1 to 6 percent slopes

Gale

Extent: 25 to 70 percent of the unit
Landform(s): hills
Slope gradient: 1 to 6 percent
Parent material: loess over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 30 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.3
2Cr -- 30 to 80 in	weathered bedrock	moderate		

Oak Center

Extent: 25 to 70 percent of the unit
Landform(s): hills
Slope gradient: 1 to 6 percent
Parent material: loess over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 40 to 80 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 54 in	silt loam	moderate	8.98 to 9.87 in	5.1 to 7.3
2Bt -- 54 to 56 in	fine sandy loam	moderate	0.24 to 0.35 in	5.1 to 6.5
3C -- 56 to 62 in	fine sand	rapid	0.24 to 0.41 in	5.1 to 6.5
3Cr -- 62 to 80 in	weathered bedrock	moderate		

N526F--Gale-Oak Center complex, 18 to 45 percent slopes

Gale

Extent: 20 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 45 percent
Parent material: loess over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 7e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 30 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.3
2Cr -- 30 to 80 in	weathered bedrock	moderate		

Oak Center

Extent: 15 to 45 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 45 percent
Parent material: loess over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 40 to 80 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 54 in	silt loam	moderate	8.98 to 9.87 in	5.1 to 7.3
2Bt -- 54 to 56 in	fine sandy loam	moderate	0.24 to 0.35 in	5.1 to 6.5
3C -- 56 to 62 in	fine sand	rapid	0.24 to 0.41 in	5.1 to 6.5
3Cr -- 62 to 80 in	weathered bedrock	moderate		

N534E--Downs-Nasset complex, 18 to 25 percent slopes

Downs

Extent: 30 to 80 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 25 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 40 in	silty clay loam	moderate	6.46 to 7.10 in	5.1 to 6.5
BC -- 40 to 80 in	silt loam	moderate	7.95 to 8.75 in	5.1 to 7.8

Nasset

Extent: 15 to 40 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 25 percent
Parent material: loess over thin residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
Bt -- 6 to 41 in	silt loam	moderate	7.01 to 7.71 in	5.1 to 6.5
2R -- 41 to 60 in	weathered bedrock	rapid		

N535B--Hesch-Rasset complex, 1 to 6 percent slopes

Hesch

Extent: 25 to 85 percent of the unit
Landform(s): strath terraces
Slope gradient: 1 to 6 percent
Parent material: coarse-loamy sediments over sandy residuum over sandstone
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
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) .24
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,A -- 0 to 12 in	fine sandy loam	moderately rapid	1.77 to 2.01 in	5.6 to 7.3
BA -- 12 to 19 in	fine sandy loam	moderately rapid	0.85 to 1.35 in	5.1 to 6.5
Bt1 -- 19 to 29 in	loam	moderately rapid	1.23 to 1.94 in	5.1 to 6.5
Bt2 -- 29 to 32 in	sandy loam	moderately rapid	0.33 to 0.52 in	5.1 to 6.5
2C -- 32 to 38 in	fine sand	rapid	0.31 to 0.44 in	5.1 to 6.5
2Cr -- 38 to 60 in	weathered bedrock	moderate		

Rasset

Extent: 15 to 65 percent of the unit
Landform(s): strath terraces
Slope gradient: 1 to 6 percent
Parent material: coarse-loamy sediments over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
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,A -- 0 to 15 in	fine sandy loam	moderately rapid	2.24 to 2.54 in	5.6 to 7.3
Bt -- 15 to 28 in	sandy loam	moderately rapid	1.56 to 2.47 in	5.1 to 7.3
2BC -- 28 to 36 in	loamy sand	rapid	0.39 to 0.79 in	5.1 to 6.5
2C1 -- 36 to 60 in	sand	very rapid	0.96 to 1.68 in	5.1 to 6.5
2C2 -- 60 to 80 in	sand	very rapid	0.80 to 1.41 in	6.1 to 7.8

N535B--Hesch-Rasset complex, 1 to 6 percent slopes

N537E2--Fayette-Hersey, bedrock substratum, complex, 18 to 25 percent slopes, moderately eroded

Fayette, moderately eroded

Extent: 30 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 18 to 25 percent
Parent material: loess
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) .49
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 3 in	silt loam	moderate	0.69 to 0.76 in	5.6 to 7.3
E,BE -- 3 to 14 in	silt loam	moderate	2.20 to 2.43 in	5.6 to 7.3
Bt -- 14 to 34 in	silty clay loam	moderate	3.94 to 4.33 in	5.1 to 6.5
BC,C -- 34 to 60 in	silt loam	moderate	5.20 to 5.72 in	5.1 to 7.8

Hersey, bedrock substratum, moderately eroded

Extent: 15 to 45 percent of the unit
Landform(s): loess hills
Slope gradient: 18 to 25 percent
Parent material: loess over loamy till over limestone bedrock
Restrictive feature(s): lithic bedrock at 60 to 80 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) .49
Land capability, nonirrigated: 6e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 62 in	silt loam	moderate	10.79 to 11.87 in	5.1 to 6.5
2Bt -- 62 to 67 in	loam	moderate	0.77 to 0.97 in	5.1 to 7.3
3BC -- 67 to 72 in	very flaggy fine sandy loam	rapid	0.31 to 0.72 in	7.4 to 8.4
3R -- 72 to 80 in	weathered bedrock	rapid		

N538C2--Waubeek and Massbach soils, 6 to 12 percent slopes, moderately eroded

Waubeek, moderately eroded

Extent: 0 to 100 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over loamy 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) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E -- 7 to 13 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 13 to 29 in	silty clay loam	moderate	3.23 to 3.55 in	5.1 to 6.5
2Bt -- 29 to 45 in	loam	moderate	2.68 to 2.99 in	5.1 to 7.3
2BC1 -- 45 to 57 in	loam	moderately slow	1.95 to 2.32 in	6.1 to 7.3
2BC2 -- 57 to 80 in	loam	moderately slow	3.65 to 4.34 in	6.1 to 8.3

Massbach, moderately eroded

Extent: 0 to 100 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 40 to 60 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E -- 7 to 11 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 7.3
BE,Bt -- 11 to 39 in	silty clay loam	moderate	5.59 to 6.15 in	5.6 to 7.3
2Bt -- 39 to 46 in	silty clay	slow	0.57 to 1.28 in	6.1 to 7.8
2Cr -- 46 to 60 in	weathered bedrock	slow		

N538C2--Waubeek and Massbach soils, 6 to 12 percent slopes, moderately eroded

N552B--Schapville-Winneshiek complex, 2 to 6 percent slopes

Schapville

Extent: 20 to 50 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
AB -- 8 to 12 in	silt loam	moderate	0.87 to 0.94 in	5.6 to 7.3
Bt -- 12 to 22 in	silty clay loam	moderate	2.05 to 2.25 in	5.6 to 7.3
2Bt -- 22 to 25 in	silty clay	slow	0.25 to 0.38 in	5.6 to 7.8
2Cr -- 25 to 60 in	weathered bedrock	slow		

Winneshiek

Extent: 20 to 50 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loamy sediments over residuum over limestone
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E, BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	rapid		

N553B--Frankville-Nasset-Mt. Carroll complex, 2 to 6 percent slopes

Frankville

Extent: 30 to 70 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 2 to 6 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt -- 14 to 23 in	silt loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt -- 23 to 28 in	clay	slow	0.41 to 0.67 in	6.1 to 7.3
3R -- 28 to 80 in	weathered bedrock	moderately slow		

Nasset

Extent: 15 to 40 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silt loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

N553B--Frankville-Nasset-Mt. Carroll complex, 2 to 6 percent slopes

Mt. Carroll

Extent: 15 to 30 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 17 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bt -- 17 to 55 in	silt loam	moderate	7.64 to 8.40 in	5.1 to 7.3
BC -- 55 to 62 in	silt loam	moderate	1.34 to 1.47 in	5.6 to 7.8
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	5.6 to 8.4

N553C2--Frankville-Nasset-Mt. Carroll complex, 6 to 12 percent slopes, moderately eroded

Frankville, moderately eroded

Extent: 30 to 70 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 6 to 12 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE --	6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt --	14 to 23 in	silt loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt --	23 to 28 in	clay	slow	0.41 to 0.67 in	6.1 to 7.3
3R --	28 to 80 in	weathered bedrock	moderately slow		

N553C2--Frankville-Nasset-Mt. Carroll complex, 6 to 12 percent slopes, moderately eroded

Nasset, moderately eroded

Extent: 15 to 40 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silt loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

Mt. Carroll, moderately eroded

Extent: 15 to 30 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 17 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bt -- 17 to 55 in	silt loam	moderate	7.64 to 8.40 in	5.1 to 7.3
BC -- 55 to 62 in	silt loam	moderate	1.34 to 1.47 in	5.6 to 7.8
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	5.6 to 8.4

N553C2--Frankville-Nasset-Mt. Carroll complex, 6 to 12 percent slopes, moderately eroded

N553D2--Frankville-Nasset-Mt. Carroll complex, 12 to 18 percent slopes, moderately eroded

Frankville, moderately eroded

Extent: 30 to 70 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 12 to 18 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE --	6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt --	14 to 23 in	silt loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt --	23 to 28 in	clay	slow	0.41 to 0.67 in	6.1 to 7.3
3R --	28 to 80 in	weathered bedrock	moderately slow		

N553D2--Frankville-Nasset-Mt. Carroll complex, 12 to 18 percent slopes, moderately eroded

Nasset, moderately eroded

Extent: 15 to 40 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silt loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

Mt. Carroll, moderately eroded

Extent: 15 to 30 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 17 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bt -- 17 to 55 in	silt loam	moderate	7.64 to 8.40 in	5.1 to 7.3
BC -- 55 to 62 in	silt loam	moderate	1.34 to 1.47 in	5.6 to 7.8
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	5.6 to 8.4

N553D2--Frankville-Nasset-Mt. Carroll complex, 12 to 18 percent slopes, moderately eroded

N553E--Frankville-Nasset-Mt. Carroll complex, 18 to 35 percent slopes

Frankville

Extent: 20 to 75 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 18 to 35 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt -- 14 to 23 in	silt loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt -- 23 to 28 in	clay	slow	0.41 to 0.67 in	6.1 to 7.3
3R -- 28 to 80 in	weathered bedrock	moderately slow		

Nasset

Extent: 15 to 65 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silt loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

N553E--Frankville-Nasset-Mt. Carroll complex, 18 to 35 percent slopes

Mt. Carroll

Extent: 5 to 15 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 24 in	silt loam	moderate	3.23 to 3.55 in	5.1 to 7.3
Bw -- 24 to 46 in	silt loam	moderate	4.41 to 4.85 in	5.6 to 7.8
BC -- 46 to 60 in	silt loam	moderate	2.48 to 2.76 in	7.4 to 8.4
C -- 60 to 80 in	silt loam	moderate	3.61 to 4.02 in	7.4 to 8.4

N555B--Tama-Dinsmore complex, 2 to 6 percent slopes

Tama

Extent: 15 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 13 in	silt loam	moderate	2.86 to 3.12 in	5.6 to 7.3
Bt -- 13 to 44 in	silt loam	moderate	6.22 to 6.84 in	5.1 to 6.5
BC -- 44 to 76 in	silt loam	moderate	6.38 to 7.02 in	5.6 to 7.8
C -- 76 to 80 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 8.4

Dinsmore

Extent: 15 to 75 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess over loamy 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) .32
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 16 in	silt loam	moderate	3.55 to 3.87 in	5.6 to 7.3
Bt -- 16 to 48 in	silty clay loam	moderate	6.38 to 7.02 in	5.1 to 7.3
2BC -- 48 to 80 in	loam	moderately slow	5.10 to 6.06 in	6.1 to 8.3

N572B--Downs-Hersey, bedrock substratum, complex, 2 to 6 percent slopes

Downs

Extent: 45 to 85 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

Hersey, bedrock substratum

Extent: 15 to 40 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess over loamy till over limestone bedrock
Restrictive feature(s): lithic bedrock at 60 to 80 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) .32
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 -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 60 in	silt loam	moderate	10.16 to 11.17 in	5.1 to 6.5
2BC -- 60 to 70 in	clay loam	moderate	1.43 to 1.94 in	5.1 to 7.3
3R -- 70 to 80 in	weathered bedrock	rapid		

N572C2--Downs-Hersey, bedrock substratum, complex, 6 to 12 percent slopes, moderately eroded

Downs, moderately eroded

Extent: 45 to 75 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

Hersey, bedrock substratum, moderately eroded

Extent: 15 to 45 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess over loamy till over limestone bedrock
Restrictive feature(s): lithic bedrock at 60 to 80 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) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 60 in	silt loam	moderate	10.16 to 11.17 in	5.1 to 6.5
2BC -- 60 to 70 in	clay loam	moderate	1.43 to 1.94 in	5.1 to 7.3
3R -- 70 to 80 in	weathered bedrock	rapid		

N572D2--Downs-Hersey, bedrock substratum, complex, 12 to 18 percent slopes, moderately eroded

Downs, moderately eroded

Extent: 45 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

Hersey, bedrock substratum, moderately eroded

Extent: 15 to 45 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess over loamy till over limestone bedrock
Restrictive feature(s): lithic bedrock at 60 to 80 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) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 60 in	silt loam	moderate	10.16 to 11.17 in	5.1 to 6.5
2BC -- 60 to 70 in	clay loam	moderate	1.43 to 1.94 in	5.1 to 7.3
3R -- 70 to 80 in	weathered bedrock	rapid		

N574B--Downs-Hersey complex, 2 to 6 percent slopes

Downs

Extent: 15 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

Hersey

Extent: 15 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess over loamy 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) .32
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 -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 58 in	silt loam	moderate	10.00 to 11.00 in	5.1 to 6.5
2Bt -- 58 to 80 in	clay loam	moderate	3.09 to 4.19 in	5.1 to 7.3

N574C2--Downs-Hersey complex, 6 to 12 percent slopes, moderately eroded

Downs, moderately eroded

Extent: 20 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

Hersey, moderately eroded

Extent: 15 to 75 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess over loamy 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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 58 in	silt loam	moderate	10.00 to 11.00 in	5.1 to 6.5
2Bt -- 58 to 80 in	clay loam	moderate	3.09 to 4.19 in	5.1 to 7.3

N574D2--Downs-Hersey complex, 12 to 18 percent slopes, moderately eroded

Downs, moderately eroded

Extent: 15 to 60 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

Hersey, moderately eroded

Extent: 15 to 60 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess over loamy 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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 58 in	silt loam	moderate	10.00 to 11.00 in	5.1 to 6.5
2Bt -- 58 to 80 in	clay loam	moderate	3.09 to 4.19 in	5.1 to 7.3

N576B--Rasset fine sandy loam, 0 to 6 percent slopes

Rasset

Extent: 80 to 100 percent of the unit
Landform(s): terraces
Slope gradient: 0 to 6 percent
Parent material: coarse-loamy sediments over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .24
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,A -- 0 to 15 in	fine sandy loam	moderately rapid	2.24 to 2.54 in	5.6 to 7.3
Bt -- 15 to 28 in	sandy loam	moderately rapid	1.56 to 2.47 in	5.1 to 7.3
2BC -- 28 to 36 in	loamy sand	rapid	0.47 to 0.87 in	5.1 to 6.5
2C1 -- 36 to 60 in	sand	very rapid	0.48 to 1.68 in	5.1 to 6.5
2C2 -- 60 to 80 in	sand	very rapid	0.40 to 1.41 in	6.1 to 7.8

N577A--Shandep-Cylinder complex, 0 to 2 percent slopes

Shandep

Extent: 25 to 75 percent of the unit
Landform(s): swales on outwash plains, swales on stream terraces
Slope gradient: 0 to 2 percent
Parent material: loamy sediments over sandy and gravelly outwash
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): 6
Wind erodibility index (WEI): 48
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 --	0 to 5 in	loam	moderate	1.02 to 1.13 in	6.1 to 7.3
A --	5 to 29 in	clay loam	moderate	4.08 to 5.28 in	6.1 to 7.3
Bg1 --	29 to 37 in	clay loam	moderate	1.18 to 1.57 in	6.1 to 7.3
Bg2 --	37 to 45 in	loam	moderate	1.18 to 1.57 in	6.1 to 7.8
2Cg --	45 to 60 in	loamy sand	very rapid	0.30 to 1.50 in	6.6 to 8.4

N577A--Shandep-Cylinder complex, 0 to 2 percent slopes

Cylinder

Extent: 20 to 40 percent of the unit
Landform(s): flats on outwash plains, flats on stream terraces
Slope gradient: 0 to 2 percent
Parent material: loamy sediments over sandy and gravelly outwash
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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .24
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A1 -- 0 to 14 in	loam	moderate	2.83 to 3.12 in	5.6 to 7.3
A2 -- 14 to 18 in	loam	moderate	0.67 to 0.87 in	6.1 to 7.3
Bg1 -- 18 to 24 in	clay loam	moderate	0.89 to 1.12 in	6.1 to 7.3
Bg2 -- 24 to 28 in	loam	moderate	0.59 to 0.75 in	6.1 to 7.3
2BC,2C -- 28 to 80 in	gravelly loamy sand	very rapid	1.04 to 5.20 in	6.6 to 7.8

N578B--Barremills silt loam, drainageway, 1 to 5 percent slopes, occasionally flooded

Barremills, drainageway, occasionally flooded

Extent: 75 to 98 percent of the unit
Landform(s): drainageways
Slope gradient: 1 to 5 percent
Parent material: silty slope alluvium over loess
Restrictive feature(s): greater than 60 inches
Flooding: occasional
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) .32
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,AB -- 0 to 27 in	silt loam	moderate	5.98 to 6.52 in	5.6 to 7.3
Bt -- 27 to 65 in	silt loam	moderate	7.56 to 8.31 in	5.1 to 7.3
BC -- 65 to 80 in	silt loam	moderate	2.99 to 3.29 in	5.1 to 7.3

N579A--Dakota silt loam, 0 to 3 percent slopes

Dakota

Extent: 85 to 95 percent of the unit
Landform(s): stream terraces
Slope gradient: 0 to 3 percent
Parent material: silty sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 14 in	silt loam	moderate	3.12 to 3.40 in	5.1 to 7.3
Bt1	14 to 23 in	silt loam	moderate	1.47 to 1.91 in	5.1 to 6.5
Bt2	23 to 34 in	loam	moderate	1.87 to 2.43 in	5.1 to 6.5
2Bt	34 to 41 in	gravelly loamy sand	rapid	0.35 to 0.71 in	5.1 to 6.5
2BC	41 to 65 in	stratified gravelly coarse sand to sand	very rapid	0.48 to 1.68 in	5.6 to 6.5
2C	65 to 80 in	stratified gravelly coarse sand to sand	very rapid	0.30 to 1.05 in	6.1 to 7.8

N580G--Brodale, very flaggy-Bellechester-Rock outcrop complex, 45 to 90 percent slopes

Brodale, very flaggy

Extent: 20 to 70 percent of the unit
Landform(s): valley sides
Slope gradient: 45 to 90 percent
Parent material: loamy-skeletal colluvium
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): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .20
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 12 in	very flaggy loam	moderate	0.83 to 1.77 in	6.6 to 8.4
C -- 12 to 60 in	very flaggy loam	moderately rapid	1.92 to 7.20 in	7.4 to 8.4

Bellechester

Extent: 15 to 30 percent of the unit
Landform(s): valley sides
Slope gradient: 45 to 90 percent
Parent material: sandy colluvium and/or residuum
Restrictive feature(s): paralithic bedrock at 40 to 60 inche
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 1
Wind erodibility index (WEI): 250
Kw factor (surface layer) .15
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 16 in	sand	rapid	0.81 to 1.29 in	6.1 to 8.4
Bw1,Bw2,BC -- 16 to 42 in	sand	rapid	0.78 to 2.60 in	6.6 to 8.4
Cr -- 42 to 60 in	weathered bedrock	moderate		

N580G--Brodale, very flaggy-Bellechester-Rock outcrop complex, 45 to 90 percent slopes

Rock outcrop

Extent: 5 to 15 percent of the unit
Landform(s): valley sides
Slope gradient:
Parent material:
Restrictive feature(s): lithic bedrock
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: 8
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

N581B--Rockton-Atkinson complex, strath terrace, 0 to 6 percent slopes

Rockton, strath terrace

Extent: 20 to 80 percent of the unit
Landform(s): strath terraces
Slope gradient: 2 to 6 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 10 in	silt loam	moderate	2.17 to 2.36 in	5.6 to 7.3
Bt -- 10 to 19 in	silt loam	moderate	1.54 to 1.99 in	5.1 to 6.5
2Bt -- 19 to 27 in	sandy loam	moderately rapid	0.94 to 1.50 in	5.1 to 6.5
3C -- 27 to 31 in	very channery fine sandy loam	moderately rapid	0.13 to 0.52 in	6.1 to 8.4
3R -- 31 to 60 in	unweathered bedrock	moderately slow		

Atkinson, strath terrace

Extent: 15 to 50 percent of the unit
Landform(s): strath terraces
Slope gradient: 2 to 6 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 12 in	silt loam	moderate	2.60 to 2.83 in	5.6 to 7.3
Bt -- 12 to 19 in	silt loam	moderate	1.20 to 1.56 in	5.1 to 6.5
2Bt -- 19 to 51 in	sandy loam	moderately rapid	3.87 to 6.13 in	5.1 to 6.5
3C -- 51 to 52 in	very channery fine sandy loam	moderately rapid	0.02 to 0.09 in	6.1 to 8.4
3R -- 52 to 60 in	unweathered bedrock	moderately slow		

N581B--Rockton-Atkinson complex, strath terrace, 0 to 6 percent slopes

N581C2--Rockton-Atkinson complex, strath terrace, 6 to 12 percent slopes, moderately eroded

Rockton, strath terrace, moderately eroded

Extent: 20 to 80 percent of the unit
Landform(s): strath terraces
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 10 in	silt loam	moderate	2.17 to 2.36 in	5.6 to 7.3
Bt --	10 to 19 in	silt loam	moderate	1.54 to 1.99 in	5.1 to 6.5
2Bt --	19 to 27 in	sandy loam	moderately rapid	0.94 to 1.50 in	5.1 to 6.5
3C --	27 to 31 in	very channery fine sandy loam	moderately rapid	0.13 to 0.52 in	6.1 to 8.4
3R --	31 to 60 in	unweathered bedrock	moderately slow		

N581C2--Rockton-Atkinson complex, strath terrace, 6 to 12 percent slopes, moderately eroded

Atkinson, strath terrace, moderately eroded

Extent: 15 to 50 percent of the unit
Landform(s): strath terraces
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 12 in	silt loam	moderate	2.60 to 2.83 in	5.6 to 7.3
Bt --	12 to 19 in	silt loam	moderate	1.20 to 1.56 in	5.1 to 6.5
2Bt --	19 to 51 in	sandy loam	moderately rapid	3.87 to 6.13 in	5.1 to 6.5
3C --	51 to 52 in	very channery fine sandy loam	moderately rapid	0.02 to 0.09 in	6.1 to 8.4
3R --	52 to 60 in	unweathered bedrock	moderately slow		

N582B--Newhouse-Valton complex, 2 to 6 percent slopes

Newhouse

Extent: 20 to 75 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess over stratified loamy pedisediment
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) .37
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 -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
BE -- 9 to 13 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 7.3
Bt -- 13 to 25 in	silt loam	moderate	2.44 to 2.69 in	5.1 to 7.3
2Bt -- 25 to 60 in	stratified sandy loam to clay loam	moderate	3.81 to 5.54 in	5.1 to 6.0

Valton

Extent: 15 to 35 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess over clayey pedisediment
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 22 in	silt loam	moderate	2.60 to 2.86 in	5.1 to 7.3
2Bt -- 22 to 60 in	silty clay	slow	2.27 to 6.05 in	4.5 to 6.5

N582C2--Newhouse-Valton complex, 6 to 12 percent slopes, moderately eroded

Newhouse, moderately eroded

Extent: 20 to 75 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over stratified loamy pedisediment
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) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
BE -- 9 to 13 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 7.3
Bt -- 13 to 25 in	silt loam	moderate	2.44 to 2.69 in	5.1 to 7.3
2Bt -- 25 to 60 in	stratified sandy loam to clay loam	moderate	3.81 to 5.54 in	5.1 to 6.0

Valton, moderately eroded

Extent: 15 to 35 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over clayey pedisediment
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 22 in	silt loam	moderate	2.60 to 2.86 in	5.1 to 7.3
2Bt -- 22 to 60 in	silty clay	slow	2.27 to 6.05 in	4.5 to 6.5

N582D2--Newhouse-Valton complex, 12 to 18 percent slopes, moderately eroded

Newhouse, moderately eroded

Extent: 20 to 75 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over stratified loamy pedisediment
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) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
BE -- 9 to 13 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 7.3
Bt -- 13 to 25 in	silt loam	moderate	2.44 to 2.69 in	5.1 to 7.3
2Bt -- 25 to 60 in	stratified sandy loam to clay loam	moderate	3.81 to 5.54 in	5.1 to 6.0

Valton, moderately eroded

Extent: 15 to 35 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over clayey pedisediment
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: C
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 22 in	silt loam	moderate	2.60 to 2.86 in	5.1 to 7.3
2Bt -- 22 to 60 in	silty clay	slow	2.27 to 6.05 in	4.5 to 6.5

N584E--Downs silt loam, valleys, 18 to 25 percent slopes

Downs, valleys

Extent: 45 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 25 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

N585B--Mt. Carroll-Hersey complex, 2 to 6 percent slopes

Mt. Carroll

Extent: 15 to 85 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 17 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bt -- 17 to 55 in	silt loam	moderate	7.64 to 8.40 in	5.1 to 7.3
BC -- 55 to 62 in	silt loam	moderate	1.34 to 1.47 in	5.6 to 7.8
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	5.6 to 8.4

Hersey

Extent: 15 to 85 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess over loamy 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) .32
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 -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 58 in	silt loam	moderate	10.00 to 11.00 in	5.1 to 7.3
2Bt -- 58 to 80 in	clay loam	moderate	3.09 to 4.19 in	5.1 to 7.3

N585C2--Mt. Carroll-Hersey complex, 6 to 12 percent slopes, moderately eroded

Mt. Carroll, moderately eroded

Extent: 20 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 17 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bt -- 17 to 55 in	silt loam	moderate	7.64 to 8.40 in	5.1 to 7.3
BC -- 55 to 62 in	silt loam	moderate	1.34 to 1.47 in	5.6 to 7.8
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	5.6 to 8.4

Hersey, moderately eroded

Extent: 15 to 75 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess over loamy 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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 58 in	silt loam	moderate	10.00 to 11.00 in	5.1 to 7.3
2Bt -- 58 to 80 in	clay loam	moderate	3.09 to 4.19 in	5.1 to 7.3

N585D2--Mt. Carroll-Hersey complex, 12 to 18 percent slopes, moderately eroded

Mt. Carroll, moderately eroded

Extent: 15 to 60 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E,BE -- 7 to 17 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.3
Bt -- 17 to 55 in	silt loam	moderate	7.64 to 8.40 in	5.1 to 7.3
BC -- 55 to 62 in	silt loam	moderate	1.34 to 1.47 in	5.6 to 7.8
C -- 62 to 80 in	silt loam	moderate	3.26 to 3.62 in	5.6 to 8.4

Hersey, moderately eroded

Extent: 15 to 60 percent of the unit
Landform(s): loess hills
Slope gradient: 12 to 18 percent
Parent material: loess over loamy 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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 58 in	silt loam	moderate	10.00 to 11.00 in	5.1 to 7.3
2Bt -- 58 to 80 in	clay loam	moderate	3.09 to 4.19 in	5.1 to 7.3

N586C2--Ridgeton, sandy substratum-Eden Prairie complex, 6 to 12 percent slopes, moderately eroded

Ridgeton, sandy substratum, moderately eroded

Extent: 40 to 85 percent of the unit
Landform(s): terraces, valley sides
Slope gradient: 6 to 12 percent
Parent material: loamy colluvium over eolian sands or sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 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,A -- 0 to 34 in	loam	moderate	6.77 to 7.45 in	6.1 to 7.3
Bt -- 34 to 62 in	loam	moderate	4.19 to 5.31 in	6.1 to 7.3
2BC -- 62 to 68 in	loamy sand	rapid	0.50 to 0.63 in	5.6 to 7.3
2C -- 68 to 80 in	sand	rapid	0.59 to 1.18 in	5.6 to 7.8

Eden Prairie, moderately eroded

Extent: 15 to 60 percent of the unit
Landform(s): terraces
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediments over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.18 to 1.38 in	5.6 to 7.3
Bt -- 10 to 16 in	sandy loam	moderately rapid	0.76 to 1.07 in	5.6 to 6.5
2Bt -- 16 to 26 in	loamy sand	rapid	0.49 to 0.98 in	5.6 to 6.5
2C1 -- 26 to 50 in	sand	rapid	0.48 to 1.68 in	5.6 to 7.3
2C2 -- 50 to 80 in	sand	rapid	0.60 to 2.09 in	5.6 to 7.8

N586C2--Ridgeton, sandy substratum-Eden Prairie complex, 6 to 12 percent slopes, moderately eroded

N586D2--Ridgeton, sandy substratum-Eden Prairie complex, 12 to 20 percent slopes, moderately eroded

Ridgeton, sandy substratum, moderately eroded

Extent: 35 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 12 to 20 percent
Parent material: loamy colluvium over eolian sands or sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 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,A -- 0 to 34 in	loam	moderate	6.77 to 7.45 in	6.1 to 7.3
Bt -- 34 to 62 in	loam	moderate	4.19 to 5.31 in	6.1 to 7.3
2BC -- 62 to 68 in	loamy sand	rapid	0.50 to 0.63 in	5.6 to 7.3
2C -- 68 to 80 in	sand	rapid	0.59 to 1.18 in	5.6 to 7.8

Eden Prairie, moderately eroded

Extent: 15 to 55 percent of the unit
Landform(s): terraces
Slope gradient: 12 to 18 percent
Parent material: coarse-loamy sediments over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.18 to 1.38 in	5.6 to 7.3
Bt -- 10 to 16 in	sandy loam	moderately rapid	0.76 to 1.07 in	5.6 to 6.5
2Bt -- 16 to 26 in	loamy sand	rapid	0.49 to 0.98 in	5.6 to 6.5
2C1 -- 26 to 50 in	sand	rapid	0.48 to 1.68 in	5.6 to 7.3
2C2 -- 50 to 80 in	sand	rapid	0.60 to 2.09 in	5.6 to 7.8

N586D2--Ridgeton, sandy substratum-Eden Prairie complex, 12 to 20 percent slopes, moderately eroded

N590C2--Tama silt loam, valleys, 6 to 12 percent slopes, moderately eroded

Tama, valleys, moderately eroded

Extent: 65 to 95 percent of the unit
Landform(s): valley sides
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	silt loam	moderate	3.55 to 3.87 in	5.6 to 7.3
Bt -- 16 to 58 in	silt loam	moderate	8.35 to 9.18 in	5.1 to 6.5
BC -- 58 to 80 in	silt loam	moderate	4.41 to 4.85 in	5.6 to 7.8

N590D2--Tama silt loam, valleys, 12 to 18 percent slopes, moderately eroded

Tama, valleys, moderately eroded

Extent: 40 to 90 percent of the unit
Landform(s): valley sides
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 16 in	silt loam	moderate	3.55 to 3.87 in	5.6 to 7.3
Bt -- 16 to 58 in	silt loam	moderate	8.35 to 9.18 in	5.1 to 6.5
BC -- 58 to 80 in	silt loam	moderate	4.41 to 4.85 in	5.6 to 7.8

N591A--Port Byron silt loam, 0 to 2 percent slopes

Port Byron

Extent: 70 to 95 percent of the unit
Landform(s): loess hills
Slope gradient: 0 to 2 percent
Parent material: loess
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) .32
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	silt loam	moderate	3.12 to 3.40 in	5.6 to 7.3
Bw -- 14 to 42 in	silt loam	moderate	5.59 to 6.15 in	5.6 to 7.3
C -- 42 to 80 in	silt loam	moderate	6.80 to 7.56 in	7.4 to 8.4

N591B--Port Byron silt loam, 2 to 6 percent slopes

Port Byron

Extent: 85 to 99 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 14 in	silt loam	moderate	3.12 to 3.40 in	5.6 to 7.3
Bw -- 14 to 42 in	silt loam	moderate	5.59 to 6.15 in	5.6 to 7.3
C -- 42 to 80 in	silt loam	moderate	6.80 to 7.56 in	7.4 to 8.4

N591C2--Port Byron silt loam, 6 to 12 percent slopes, moderately eroded

Port Byron, moderately eroded

Extent: 80 to 95 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .32
Land capability, nonirrigated: 3e
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	silt loam	moderate	3.12 to 3.40 in	5.6 to 7.3
Bw -- 14 to 42 in	silt loam	moderate	5.59 to 6.15 in	5.6 to 7.3
C -- 42 to 80 in	silt loam	moderate	6.80 to 7.56 in	7.4 to 8.4

N592B--Cresent-Eden Prairie complex, 2 to 6 percent slopes

Cresent

Extent: 20 to 75 percent of the unit
Landform(s): terraces
Slope gradient: 2 to 6 percent
Parent material: loamy slope alluvium over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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	1.57 to 1.73 in	5.6 to 7.3
A,AB -- 8 to 18 in	loam	moderate	1.74 to 1.94 in	5.1 to 7.3
Bt -- 18 to 46 in	loam	moderate	4.19 to 5.31 in	5.1 to 6.5
2C1 -- 46 to 60 in	loamy sand	rapid	0.69 to 1.38 in	5.6 to 7.3
2C2 -- 60 to 80 in	sand	rapid	1.00 to 2.01 in	6.1 to 7.8

Eden Prairie

Extent: 20 to 75 percent of the unit
Landform(s): terraces
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy sediments over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.18 to 1.38 in	5.6 to 7.3
Bt -- 10 to 16 in	sandy loam	moderately rapid	0.76 to 1.07 in	5.6 to 6.5
2Bt -- 16 to 26 in	loamy sand	rapid	0.49 to 0.98 in	5.6 to 6.5
2C1 -- 26 to 50 in	sand	rapid	0.48 to 1.68 in	5.6 to 7.3
2C2 -- 50 to 80 in	sand	rapid	0.60 to 2.09 in	5.6 to 7.8

N593B--Sparta loamy sand, 0 to 6 percent slopes

Sparta

Extent: 85 to 100 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 0 to 6 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 20 in	loamy sand	rapid	1.81 to 2.21 in	5.1 to 7.3
Bw1 -- 20 to 40 in	loamy sand	rapid	1.00 to 2.01 in	5.1 to 6.5
Bw2 -- 40 to 51 in	sand	rapid	0.55 to 0.77 in	5.1 to 6.5
E and Bt -- 51 to 80 in	stratified sand to loamy sand	rapid	1.44 to 2.01 in	5.1 to 6.5

N593C--Sparta loamy sand, 6 to 12 percent slopes

Sparta

Extent: 75 to 95 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 6 to 12 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 20 in	loamy sand	rapid	1.81 to 2.21 in	5.1 to 7.3
Bw1 -- 20 to 40 in	loamy sand	rapid	1.00 to 2.01 in	5.1 to 6.5
Bw2 -- 40 to 51 in	sand	rapid	0.55 to 0.77 in	5.1 to 6.5
E and Bt -- 51 to 80 in	stratified sand to loamy sand	rapid	1.44 to 2.01 in	5.1 to 6.5

N594B--Chelsea loamy sand, 2 to 6 percent slopes

Chelsea

Extent: 60 to 90 percent of the unit
Landform(s): valley trains, hills
Slope gradient: 2 to 6 percent
Parent material: eolian sands
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .10
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 8 in	loamy sand	rapid	0.71 to 0.87 in	5.1 to 7.3
Bw1 -- 8 to 31 in	loamy fine sand	rapid	1.16 to 2.32 in	5.1 to 6.5
Bw2 -- 31 to 41 in	fine sand	rapid	0.49 to 0.98 in	5.1 to 6.5
E and Bt -- 41 to 80 in	stratified fine sand to loamy fine sand	rapid	1.95 to 3.90 in	5.1 to 6.5

N594C--Chelsea loamy sand, 6 to 12 percent slopes

Chelsea

Extent: 60 to 90 percent of the unit
Landform(s): valley trains, hills
Slope gradient: 6 to 12 percent
Parent material: eolian sands
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .10
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 8 in	loamy sand	rapid	0.71 to 0.87 in	5.1 to 7.3
Bw1 -- 8 to 31 in	loamy fine sand	rapid	1.16 to 2.32 in	5.1 to 6.5
Bw2 -- 31 to 41 in	fine sand	rapid	0.49 to 0.98 in	5.1 to 6.5
E and Bt -- 41 to 80 in	stratified fine sand to loamy fine sand	rapid	1.95 to 3.90 in	5.1 to 6.5

N594E--Chelsea loamy sand, 12 to 35 percent slopes

Chelsea

Extent: 45 to 95 percent of the unit
Landform(s): valley trains, hills
Slope gradient: 12 to 35 percent
Parent material: eolian sands
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .10
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 4 in	loamy sand	rapid	0.35 to 0.43 in	5.1 to 7.3
E -- 4 to 36 in	fine sand	rapid	1.59 to 3.19 in	5.1 to 6.5
E and Bt -- 36 to 80 in	stratified fine sand to sandy loam	rapid	2.20 to 4.41 in	5.1 to 6.5

N596B--Eleva sandy loam, 2 to 6 percent slopes

Eleva

Extent: 35 to 75 percent of the unit
Landform(s): knolls on hills
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy sediments over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
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) .24
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 5 in	sandy loam	moderately rapid	0.61 to 0.72 in	5.1 to 7.3
BE,Bt -- 5 to 30 in	sandy loam	moderately rapid	2.48 to 4.71 in	5.1 to 6.5
2C -- 30 to 36 in	fine sand	rapid	0.30 to 0.41 in	5.1 to 6.5
2Cr -- 36 to 60 in	weathered bedrock	moderate		

N596C2--Eleva sandy loam, 6 to 12 percent slopes, moderately eroded

Eleva, moderately eroded

Extent: 40 to 80 percent of the unit
Landform(s): knolls on hills
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediments over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
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) .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 5 in	sandy loam	moderately rapid	0.61 to 0.72 in	5.1 to 7.3
BE,Bt -- 5 to 30 in	sandy loam	moderately rapid	2.48 to 4.71 in	5.1 to 6.5
2C -- 30 to 36 in	fine sand	rapid	0.30 to 0.41 in	5.1 to 6.5
2Cr -- 36 to 60 in	weathered bedrock	moderate		

N596D2--Eleva sandy loam, 12 to 18 percent slopes, moderately eroded

Eleva, moderately eroded

Extent: 60 to 80 percent of the unit
Landform(s): knolls on hills
Slope gradient: 12 to 18 percent
Parent material: coarse-loamy sediments over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
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) .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*
Ap -- 0 to 5 in	sandy loam	moderately rapid	0.61 to 0.72 in	5.1 to 7.3
BE,Bt -- 5 to 30 in	sandy loam	moderately rapid	2.48 to 4.71 in	5.1 to 6.5
2C -- 30 to 36 in	fine sand	rapid	0.30 to 0.41 in	5.1 to 6.5
2Cr -- 36 to 60 in	weathered bedrock	moderate		

N597C2--Waucoma-Winneshiek complex, 6 to 12 percent slopes, moderately eroded

Waucoma, moderately eroded

Extent: 20 to 85 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 80 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
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 6 in	loam	moderate	1.18 to 1.30 in	5.6 to 7.3
E,BE -- 6 to 17 in	loam	moderate	1.87 to 2.43 in	5.6 to 7.3
Bt -- 17 to 45 in	loam	moderate	4.19 to 5.31 in	5.6 to 7.3
2Bt -- 45 to 55 in	clay	slow	0.82 to 1.64 in	5.6 to 7.3
3R -- 55 to 60 in	weathered bedrock	moderately slow		

Winneshiek, moderately eroded

Extent: 15 to 65 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw 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 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
E,BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	moderately slow		

N597C2--Waucoma-Winneshiek complex, 6 to 12 percent slopes, moderately eroded

N598D2--Winneshiek-Waucoma complex, 12 to 18 percent slopes, moderately eroded

Winneshiek, moderately eroded

Extent: 25 to 75 percent of the unit
Landform(s): valley sides
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw 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 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
E,BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	moderately slow		

Waucoma, moderately eroded

Extent: 20 to 50 percent of the unit
Landform(s): valley sides
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 80 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
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 6 in	loam	moderate	1.18 to 1.30 in	5.6 to 7.3
E,BE -- 6 to 17 in	loam	moderate	1.87 to 2.43 in	5.6 to 7.3
Bt -- 17 to 45 in	loam	moderate	4.19 to 5.31 in	5.6 to 7.3
2Bt -- 45 to 55 in	clay	slow	0.82 to 1.64 in	5.6 to 7.3
3R -- 55 to 60 in	weathered bedrock	moderately slow		

N598D2--Winneshiek-Waucoma complex, 12 to 18 percent slopes, moderately eroded

N598E--Winneshiek-Waucoma complex, 18 to 35 percent slopes

Winneshiek

Extent: 25 to 75 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 25 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw 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 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
E,BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	moderately slow		

Waucoma

Extent: 15 to 40 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 25 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 80 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
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 6 in	loam	moderate	1.18 to 1.30 in	5.6 to 7.3
E,BE -- 6 to 17 in	loam	moderate	1.87 to 2.43 in	5.6 to 7.3
Bt -- 17 to 45 in	loam	moderate	4.19 to 5.31 in	5.6 to 7.3
2Bt -- 45 to 55 in	clay	slow	0.82 to 1.64 in	5.6 to 7.3
3R -- 55 to 60 in	weathered bedrock	moderately slow		

N598E--Winneshiek-Waucoma complex, 18 to 35 percent slopes

N599B--Winneshiek loam, sinkhole karst, 2 to 6 percent slopes

Winneshiek, sinkhole karst

Extent: 60 to 85 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
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 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
E,BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	moderately slow		

N599C2--Winneshiek loam, sinkhole karst, 6 to 12 percent slopes, moderately eroded

Winneshiek, sinkhole karst, moderately eroded

Extent: 60 to 80 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw 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 7 in	loam	moderate	1.42 to 1.56 in	5.6 to 7.3
E,BE -- 7 to 16 in	loam	moderate	1.54 to 1.99 in	5.6 to 7.3
Bt -- 16 to 21 in	clay loam	moderate	0.71 to 0.90 in	5.6 to 7.3
2Bt -- 21 to 24 in	clay	slow	0.25 to 0.50 in	5.6 to 7.3
3R -- 24 to 60 in	weathered bedrock	moderately slow		

N600C2--Eleva-Alvin complex, 6 to 12 percent slopes, moderately eroded

Eleva, moderately eroded

Extent: 45 to 80 percent of the unit
Landform(s): strath terraces
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediments over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
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) .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 5 in	sandy loam	moderately rapid	0.61 to 0.72 in	5.1 to 7.3
BE,Bt -- 5 to 30 in	sandy loam	moderately rapid	2.48 to 4.71 in	5.1 to 6.5
2C -- 30 to 36 in	fine sand	rapid	0.30 to 0.41 in	5.1 to 6.5
2Cr -- 36 to 60 in	weathered bedrock	moderate		

Alvin, moderately eroded

Extent: 15 to 50 percent of the unit
Landform(s): strath terraces
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy eolian deposits and/or sandy eolian 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) .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	fine sandy loam	moderately rapid	1.18 to 1.34 in	5.1 to 7.3
BE,Bt -- 8 to 25 in	fine sandy loam	moderately rapid	2.08 to 3.29 in	5.1 to 6.5
E and Bt -- 25 to 70 in	stratified loamy fine sand to fine sandy loam	rapid	3.14 to 7.18 in	5.1 to 6.5
C -- 70 to 80 in	fine sandy loam	moderately rapid	0.69 to 1.57 in	5.1 to 7.8

N601C2--Oak Center-Hersey complex, 6 to 12 percent slopes, moderately eroded

Oak Center, moderately eroded

Extent: 20 to 65 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 40 to 80 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 54 in	silt loam	moderate	8.98 to 9.87 in	5.1 to 7.3
2Bt -- 54 to 56 in	fine sandy loam	moderate	0.24 to 0.35 in	5.1 to 6.5
3C -- 56 to 62 in	fine sand	rapid	0.24 to 0.41 in	5.1 to 6.5
3Cr -- 62 to 80 in	weathered bedrock	moderate		

Hersey, moderately eroded

Extent: 15 to 25 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over loamy 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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 58 in	silt loam	moderate	10.00 to 11.00 in	5.1 to 7.3
2Bt -- 58 to 80 in	clay loam	moderate	3.09 to 4.19 in	5.1 to 7.3

N601D2--Oak Center-Hersey complex, 12 to 18 percent slopes, moderately eroded

Oak Center, moderately eroded

Extent: 15 to 70 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over sandy residuum over sandstone bedrock
Restrictive feature(s): paralithic bedrock at 40 to 80 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.6 to 7.3
Bt -- 9 to 54 in	silt loam	moderate	8.98 to 9.87 in	5.1 to 7.3
2Bt -- 54 to 56 in	fine sandy loam	moderate	0.24 to 0.35 in	5.1 to 6.5
3C -- 56 to 62 in	fine sand	rapid	0.24 to 0.41 in	5.1 to 6.5
3Cr -- 62 to 80 in	weathered bedrock	moderate		

Hersey, moderately eroded

Extent: 15 to 25 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over loamy 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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 58 in	silt loam	moderate	10.00 to 11.00 in	5.1 to 7.3
2Bt -- 58 to 80 in	clay loam	moderate	3.09 to 4.19 in	5.1 to 7.3

N602A--Joy silt loam, 1 to 3 percent slopes

Joy

Extent: 55 to 90 percent of the unit
Landform(s): drainageways
Slope gradient: 1 to 3 percent
Parent material: loess
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): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .28
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 17 in	silt loam	moderate	3.72 to 4.06 in	5.6 to 7.3
Bt,Btg -- 17 to 49 in	silt loam	moderate	6.38 to 7.02 in	5.1 to 7.3
Cg -- 49 to 60 in	silt loam	moderate	2.09 to 2.43 in	6.1 to 8.4

N603C2--Lilah-Billett complex, 6 to 12 percent slopes, moderately eroded

Lilah, moderately eroded

Extent: 30 to 75 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
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) .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 6 in	sandy loam	moderately rapid	0.71 to 0.83 in	5.1 to 7.3
BA,Bt1 -- 6 to 15 in	gravelly sandy loam	moderately rapid	0.72 to 1.18 in	5.1 to 6.0
2Bt2 -- 15 to 28 in	gravelly loamy sand	very rapid	0.26 to 1.30 in	5.1 to 6.0
2Bt3 -- 28 to 39 in	sand	very rapid	0.22 to 1.10 in	5.1 to 6.0
2C -- 39 to 80 in	loamy sand	very rapid	0.82 to 4.09 in	5.1 to 6.0

N603C2--Lilah-Billett complex, 6 to 12 percent slopes, moderately eroded

Billett, moderately eroded

Extent: 20 to 40 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
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	sandy loam	moderately rapid	0.94 to 1.10 in	5.6 to 7.3
E -- 8 to 13 in	sandy loam	moderately rapid	0.61 to 0.82 in	5.1 to 6.5
Bt1 -- 13 to 28 in	sandy loam	moderately rapid	1.80 to 2.39 in	5.1 to 6.5
Bt2 -- 28 to 41 in	loamy sand	rapid	1.04 to 2.08 in	5.1 to 6.5
Bt3 -- 41 to 47 in	sandy loam	rapid	0.47 to 0.94 in	5.1 to 6.5
C -- 47 to 60 in	stratified gravelly loamy sand to loamy sand	rapid	0.26 to 1.30 in	5.1 to 6.5

N603D2--Lilah-Billett complex, 12 to 18 percent slopes, moderately eroded

Lilah, moderately eroded

Extent: 30 to 80 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
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) .20
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: B
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	sandy loam	moderately rapid	0.71 to 0.83 in	5.1 to 7.3
BA,Bt1 -- 6 to 15 in	gravelly sandy loam	moderately rapid	0.72 to 1.18 in	5.1 to 6.0
2Bt2 -- 15 to 28 in	gravelly loamy sand	very rapid	0.26 to 1.30 in	5.1 to 6.0
2Bt3 -- 28 to 39 in	sand	very rapid	0.22 to 1.10 in	5.1 to 6.0
2C -- 39 to 80 in	loamy sand	very rapid	0.82 to 4.09 in	5.1 to 6.0

N603D2--Lilah-Billett complex, 12 to 18 percent slopes, moderately eroded

Billett, moderately eroded

Extent: 15 to 35 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 12 to 18 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
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	sandy loam	moderately rapid	0.94 to 1.10 in	5.6 to 7.3
E	-- 8 to 13 in	sandy loam	moderately rapid	0.61 to 0.82 in	5.1 to 6.5
Bt1	-- 13 to 28 in	sandy loam	moderately rapid	1.80 to 2.39 in	5.1 to 6.5
Bt2	-- 28 to 41 in	loamy sand	rapid	1.04 to 2.08 in	5.1 to 6.5
Bt3	-- 41 to 47 in	sandy loam	rapid	0.47 to 0.94 in	5.1 to 6.5
C	-- 47 to 60 in	stratified gravelly loamy sand to loamy sand	rapid	0.26 to 1.30 in	5.1 to 6.5

N604B--Billett sandy loam, 2 to 6 percent slopes

Billett

Extent: 40 to 90 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
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 8 in	sandy loam	moderately rapid	0.94 to 1.10 in	5.6 to 7.3
E	-- 8 to 13 in	sandy loam	moderately rapid	0.61 to 0.82 in	5.1 to 6.5
Bt1	-- 13 to 28 in	sandy loam	moderately rapid	1.80 to 2.39 in	5.1 to 6.5
Bt2	-- 28 to 41 in	loamy sand	rapid	1.04 to 2.08 in	5.1 to 6.5
Bt3	-- 41 to 47 in	sandy loam	rapid	0.47 to 0.94 in	5.1 to 6.5
C	-- 47 to 60 in	stratified gravelly loamy sand to loamy sand	rapid	0.26 to 1.30 in	5.1 to 6.5

N604C2--Billett sandy loam, 6 to 12 percent slopes, moderately eroded

Billett, moderately eroded

Extent: 70 to 95 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
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	sandy loam	moderately rapid	0.94 to 1.10 in	5.6 to 7.3
E	-- 8 to 13 in	sandy loam	moderately rapid	0.61 to 0.82 in	5.1 to 6.5
Bt1	-- 13 to 28 in	sandy loam	moderately rapid	1.80 to 2.39 in	5.1 to 6.5
Bt2	-- 28 to 41 in	loamy sand	rapid	1.04 to 2.08 in	5.1 to 6.5
Bt3	-- 41 to 47 in	sandy loam	rapid	0.47 to 0.94 in	5.1 to 6.5
C	-- 47 to 60 in	stratified gravelly loamy sand to loamy sand	rapid	0.26 to 1.30 in	5.1 to 6.5

N605B--Rasset sandy loam, strath terrace, 2 to 6 percent slopes

Rasset, strath terrace

Extent: 75 to 95 percent of the unit
Landform(s): strath terraces
Slope gradient: 2 to 6 percent
Parent material: coarse-loamy sediment over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
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,A -- 0 to 15 in	sandy loam	moderately rapid	1.80 to 2.09 in	5.1 to 7.3
Bt -- 15 to 28 in	sandy loam	moderately rapid	1.56 to 2.47 in	5.1 to 7.3
2BC -- 28 to 36 in	loamy sand	rapid	0.39 to 0.87 in	5.1 to 6.5
2C1 -- 36 to 60 in	sand	very rapid	0.48 to 1.68 in	5.1 to 6.5
2C2 -- 60 to 80 in	sand	very rapid	0.40 to 1.41 in	6.1 to 7.8

N605C2--Rasset sandy loam, strath terrace, 6 to 12 percent slopes, moderately eroded

Rasset, strath terrace, moderately eroded

Extent: 55 to 90 percent of the unit
Landform(s): strath terraces
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediment over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
Kw factor (surface layer) .20
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,A -- 0 to 15 in	sandy loam	moderately rapid	1.80 to 2.09 in	5.1 to 7.3
Bt -- 15 to 28 in	sandy loam	moderately rapid	1.56 to 2.47 in	5.1 to 7.3
2BC -- 28 to 36 in	loamy sand	rapid	0.39 to 0.87 in	5.1 to 6.5
2C1 -- 36 to 60 in	sand	very rapid	0.48 to 1.68 in	5.1 to 6.5
2C2 -- 60 to 80 in	sand	very rapid	0.40 to 1.41 in	6.1 to 7.8

N606A--Tama silt loam, sandy substratum, 0 to 3 percent slopes

Tama, sandy substratum

Extent: 45 to 75 percent of the unit
Landform(s): stream terraces
Slope gradient: 0 to 3 percent
Parent material: loess over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 -- 0 to 11 in	silt loam	moderate	2.43 to 2.65 in	5.6 to 7.3
AB -- 11 to 18 in	silt loam	moderate	1.42 to 1.56 in	5.6 to 7.3
Bt -- 18 to 72 in	silt loam	moderate	10.79 to 11.87 in	5.1 to 6.5
2BC -- 72 to 80 in	loamy sand	very rapid	0.16 to 0.79 in	5.1 to 6.5

N607A--Meridian silt loam, 0 to 3 percent slopes

Meridian

Extent: 80 to 95 percent of the unit
Landform(s): terraces
Slope gradient: 0 to 3 percent
Parent material: loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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	--	0 to 9 in	silt loam	moderate	1.99 to 2.17 in	5.1 to 7.3
Bt1	--	9 to 15 in	silt loam	moderate	1.06 to 1.30 in	5.1 to 7.3
Bt2	--	15 to 28 in	loam	moderate	2.21 to 2.86 in	5.1 to 7.3
Bt3	--	28 to 32 in	sandy loam	moderately rapid	0.47 to 0.75 in	5.1 to 6.5
2BC	--	32 to 41 in	loamy coarse sand	very rapid	0.18 to 0.91 in	5.1 to 6.5
2C1	--	41 to 50 in	stratified gravelly coarse sand to sand	very rapid	0.18 to 0.63 in	5.6 to 6.5
2C2	--	50 to 80 in	stratified gravelly coarse sand to sand	very rapid	0.60 to 2.09 in	6.1 to 7.8

N607C2--Meridian silt loam, 6 to 12 percent slopes, moderately eroded

Meridian, moderately eroded

Extent: 90 to 100 percent of the unit
Landform(s): terraces
Slope gradient: 6 to 12 percent
Parent material: loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 9 in	silt loam	moderate	1.99 to 2.17 in	5.1 to 7.3
Bt1	--	9 to 15 in	silt loam	moderate	1.06 to 1.30 in	5.1 to 7.3
Bt2	--	15 to 28 in	loam	moderate	2.21 to 2.86 in	5.1 to 7.3
Bt3	--	28 to 32 in	sandy loam	moderately rapid	0.47 to 0.75 in	5.1 to 6.5
2BC	--	32 to 41 in	loamy coarse sand	very rapid	0.18 to 0.91 in	5.1 to 6.5
2C1	--	41 to 50 in	stratified gravelly coarse sand to sand	very rapid	0.18 to 0.63 in	5.6 to 6.5
2C2	--	50 to 80 in	stratified gravelly coarse sand to sand	very rapid	0.60 to 2.09 in	6.1 to 7.8

N607D2--Meridian silt loam, 12 to 18 percent slopes, moderately eroded

Meridian, moderately eroded

Extent: 75 to 95 percent of the unit
Landform(s): terraces
Slope gradient: 12 to 18 percent
Parent material: loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 9 in	silt loam	moderate	1.99 to 2.17 in	5.1 to 7.3
Bt1 --	9 to 15 in	silt loam	moderate	1.06 to 1.30 in	5.1 to 7.3
Bt2 --	15 to 28 in	loam	moderate	2.21 to 2.86 in	5.1 to 7.3
Bt3 --	28 to 32 in	sandy loam	moderately rapid	0.47 to 0.75 in	5.1 to 6.5
2BC --	32 to 41 in	loamy coarse sand	very rapid	0.18 to 0.91 in	5.1 to 6.5
2C1 --	41 to 50 in	stratified gravelly coarse sand to sand	very rapid	0.18 to 0.63 in	5.6 to 6.5
2C2 --	50 to 80 in	stratified gravelly coarse sand to sand	very rapid	0.60 to 2.09 in	6.1 to 7.8

N608A--Malardi loam, 0 to 3 percent slopes

Malardi

Extent: 70 to 90 percent of the unit
Landform(s): terraces
Slope gradient: 0 to 3 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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,AB -- 0 to 13 in	loam	moderate	2.21 to 2.47 in	5.6 to 7.3
Bt -- 13 to 18 in	loam	moderately rapid	0.56 to 0.97 in	5.6 to 7.3
2Bt1 -- 18 to 23 in	gravelly sandy loam	rapid	0.38 to 0.61 in	5.6 to 7.3
2Bt2 -- 23 to 37 in	gravelly loamy sand	very rapid	0.28 to 1.42 in	5.6 to 7.3
2C1 -- 37 to 60 in	stratified sand to gravelly coarse sand	very rapid	0.46 to 1.60 in	6.6 to 7.8
2C2 -- 60 to 80 in	stratified sand to gravelly coarse sand	very rapid	0.40 to 1.41 in	7.4 to 8.4

N608C2--Malardi loam, 6 to 12 percent slopes, moderately eroded

Malardi, moderately eroded

Extent: 65 to 85 percent of the unit
Landform(s): terraces
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .20
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	loam	moderate	1.67 to 1.87 in	5.6 to 7.3
Bt -- 10 to 15 in	sandy loam	moderately rapid	0.56 to 0.97 in	5.6 to 7.3
2Bt -- 15 to 29 in	loamy coarse sand	very rapid	0.28 to 1.42 in	5.6 to 7.3
2C -- 29 to 80 in	stratified sand to gravelly coarse sand	very rapid	1.02 to 3.56 in	7.4 to 8.4

N609D--Hawick sandy loam, 12 to 18 percent slopes

Hawick

Extent: 60 to 80 percent of the unit
Landform(s): terraces
Slope gradient: 12 to 18 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
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*
A -- 0 to 4 in	sandy loam	moderately rapid	0.47 to 0.55 in	6.1 to 7.3
BA -- 4 to 14 in	loamy sand	rapid	0.72 to 1.43 in	6.1 to 7.3
Bw -- 14 to 22 in	sand	rapid	0.31 to 0.79 in	6.1 to 7.3
C -- 22 to 80 in	stratified gravelly coarse sand to sand	very rapid	1.16 to 4.05 in	7.4 to 8.4

N609E--Hawick sandy loam, 18 to 45 percent slopes

Hawick

Extent: 55 to 85 percent of the unit
Landform(s): terraces
Slope gradient: 18 to 45 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
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*
A -- 0 to 4 in	sandy loam	moderately rapid	0.47 to 0.55 in	6.1 to 7.3
BA -- 4 to 14 in	loamy sand	rapid	0.72 to 1.43 in	6.1 to 7.3
Bw -- 14 to 22 in	sand	rapid	0.31 to 0.79 in	6.1 to 7.3
C -- 22 to 80 in	stratified gravelly coarse sand to sand	very rapid	1.16 to 4.05 in	7.4 to 8.4

N610B--Waucoma loam, 2 to 6 percent slopes

Waucoma

Extent: 45 to 90 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loamy sediments over residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 80 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
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 6 in	loam	moderate	1.18 to 1.30 in	5.6 to 7.3
E,BE -- 6 to 17 in	loam	moderate	1.87 to 2.43 in	5.6 to 7.3
Bt -- 17 to 45 in	loam	moderate	4.19 to 5.31 in	5.6 to 7.3
2Bt -- 45 to 55 in	clay	slow	0.82 to 1.64 in	5.6 to 7.3
3R -- 55 to 60 in	weathered bedrock	moderately slow		

N611A--Calco silt loam, ponded, 0 to 1 percent slopes, frequently flooded

Calco, ponded, frequently flooded

Extent: 75 to 95 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 1 percent
Parent material: calcareous silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
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: 8w
Hydric soil: yes
Hydrologic group: D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 31 in	silt loam	moderate	6.84 to 7.46 in	7.4 to 8.4
Bg -- 31 to 58 in	silt loam	moderate	4.82 to 5.89 in	7.4 to 8.4
Cg -- 58 to 75 in	silt loam	moderate	3.12 to 3.81 in	7.4 to 8.4
Ab -- 75 to 80 in	silt loam	moderate	0.99 to 1.13 in	7.4 to 8.4

N612A--Calco silt loam, 0 to 2 percent slopes, frequently flooded

Calco, frequently flooded

Extent: 90 to 99 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: calcareous silty alluvium
Restrictive feature(s): greater than 60 inches
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: 5w
Hydric soil: yes
Hydrologic group: D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A1 -- 0 to 14 in	silt loam	moderate	3.12 to 3.40 in	7.4 to 8.4
A2 -- 14 to 33 in	silt loam	moderate	3.97 to 4.54 in	7.4 to 8.4
Bg -- 33 to 80 in	silt loam	moderate	8.43 to 10.31 in	7.4 to 8.4

N613A--Calco-Udifluvents, loamy complex, 0 to 18 percent slopes, frequently flooded

Calco, frequently flooded

Extent: 70 to 95 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: calcareous silty alluvium
Restrictive feature(s): greater than 60 inches
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: 5w
Hydric soil: yes
Hydrologic group: D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A1 -- 0 to 14 in	silt loam	moderate	3.12 to 3.40 in	7.4 to 8.4
A2 -- 14 to 33 in	silt loam	moderate	3.97 to 4.54 in	7.4 to 8.4
Bg -- 33 to 80 in	silt loam	moderate	8.43 to 10.31 in	7.4 to 8.4

Udifluvents, loamy, frequently flooded

Extent: 5 to 15 percent of the unit
Landform(s): flood plains
Slope gradient: 10 to 18 percent
Parent material: loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
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) .43
Land capability, nonirrigated: 5w
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	silt loam	moderate	1.13 to 1.23 in	7.0 to 8.4
C1 -- 5 to 23 in	stratified loam to silt loam	moderate	3.01 to 3.90 in	7.4 to 8.4
C2 -- 23 to 60 in	stratified loam to sand to sandy loam	rapid	4.44 to 7.03 in	7.4 to 8.4

N614A--Kalmarville-Radford complex, 0 to 3 percent slopes, frequently flooded

Kalmarville, frequently flooded

Extent: 15 to 75 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: coarse-loamy alluvium over sandy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 5w
Hydric soil: yes
Hydrologic group: B/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 43 in	silt loam	moderate	9.44 to 10.30 in	5.6 to 7.8
2Cg -- 43 to 60 in	sand	rapid	0.85 to 1.69 in	5.6 to 7.8

Radford, frequently flooded

Extent: 15 to 50 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 3 percent
Parent material: silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 3w
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 12 in	silt loam	moderate	2.60 to 2.83 in	5.6 to 7.8
C -- 12 to 33 in	silt loam	moderate	4.25 to 4.68 in	6.1 to 7.8
Ab -- 33 to 72 in	silt loam	moderate	6.63 to 9.35 in	6.1 to 7.8
Bgb -- 72 to 80 in	silt loam	moderate	1.18 to 1.73 in	6.1 to 7.8

N615A--Otter silt loam, 0 to 2 percent slopes, occasionally flooded

Otter, occasionally flooded

Extent: 65 to 85 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: occasional
Ponding: none
Drainage class: poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw 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 39 in	silt loam	moderate	8.57 to 9.35 in	6.1 to 7.8
Bg1 -- 39 to 58 in	silt loam	moderate	3.78 to 4.16 in	6.1 to 7.8
Bg2 -- 58 to 80 in	silt loam	moderate	4.19 to 4.85 in	6.1 to 8.4

N616A--Littleton silt loam, 0 to 2 percent slopes, occasionally flooded

Littleton, occasionally flooded

Extent: 35 to 85 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: silty alluvium
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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
Land capability, nonirrigated: 2w
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 19 in	silt loam	moderate	4.16 to 4.54 in	5.6 to 7.3
AB -- 19 to 32 in	silt loam	moderate	2.86 to 3.12 in	5.6 to 7.3
Bw -- 32 to 49 in	silt loam	moderate	3.39 to 3.72 in	5.6 to 7.3
C -- 49 to 60 in	silt loam	moderate	2.09 to 2.43 in	6.1 to 8.4

N617A--Kennebec silt loam, 0 to 2 percent slopes, occasionally flooded

Kennebec, occasionally flooded

Extent: 60 to 80 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: silty 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): 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: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 41 in	silt loam	moderate	9.01 to 9.83 in	5.6 to 7.3
AC -- 41 to 54 in	silt loam	moderate	2.34 to 2.86 in	6.1 to 7.3
C -- 54 to 80 in	silt loam	moderate	4.68 to 5.72 in	6.1 to 7.3

N618A--McPaul silt loam, 0 to 3 percent slopes, frequently flooded

McPaul, frequently flooded

Extent: 40 to 90 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 2 percent
Parent material: silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
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: 5w
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	7.4 to 8.4
C -- 7 to 60 in	stratified silt loam	moderate	10.55 to 11.61 in	7.4 to 8.4

N619A--Kennebec-Lawson, channeled, complex, 0 to 3 percent slopes, flooded

Kennebec, occasionally flooded

Extent: 20 to 75 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 3 percent
Parent material: silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: occasional
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: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 41 in	silt loam	moderate	9.01 to 9.83 in	5.6 to 7.3
AC -- 41 to 54 in	silt loam	moderate	2.34 to 2.86 in	6.1 to 7.3
C -- 54 to 80 in	silt loam	moderate	4.68 to 5.72 in	6.1 to 7.3

Lawson, channeled, frequently flooded

Extent: 20 to 75 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 3 percent
Parent material: silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .32
Land capability, nonirrigated: 5w
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 30 in	silt loam	moderate	6.58 to 7.18 in	6.1 to 7.8
C -- 30 to 60 in	silt loam	moderately rapid	4.49 to 6.58 in	6.1 to 7.8

N620B--Chaseburg silt loam, 2 to 12 percent slopes, frequently flooded

Chaseburg, frequently flooded

Extent: 75 to 95 percent of the unit
Landform(s): drainageways
Slope gradient: 2 to 12 percent
Parent material: silty alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
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) .37
Land capability, nonirrigated: 5w
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 4 in	silt loam	moderate	0.87 to 0.94 in	6.1 to 7.8
C -- 4 to 60 in	stratified silt loam	moderate	11.18 to 12.30 in	6.1 to 7.8

N621B--Udifluvents, loamy, 2 to 12 percent slopes, frequently flooded

Udifluvents, loamy, frequently flooded

Extent: 70 to 90 percent of the unit
Landform(s): drainageways
Slope gradient: 2 to 12 percent
Parent material: loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: frequent
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .20
Land capability, nonirrigated: 5w
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 9 in	silt loam	moderate	1.90 to 2.08 in	6.1 to 7.8
C -- 9 to 26 in	stratified silt loam	moderate	2.54 to 3.72 in	6.1 to 7.8
Ab -- 26 to 39 in	silt loam	moderate	2.08 to 3.12 in	6.1 to 7.8
Bw -- 39 to 52 in	silt loam	moderate	1.95 to 2.73 in	6.1 to 7.8
2C -- 52 to 60 in	very gravelly loam	moderately rapid	0.63 to 1.34 in	6.6 to 7.8

N622A--Ankeny-Zumbro complex, 0 to 3 percent slopes, occasionally flooded

Ankeny, occasionally flooded

Extent: 55 to 85 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 3 percent
Parent material: coarse-loamy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: occasional
Ponding: none
Drainage class: well 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: 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 21 in	sandy loam	moderately rapid	2.71 to 3.13 in	6.1 to 7.3
AB -- 21 to 33 in	sandy loam	moderately rapid	1.46 to 2.07 in	6.1 to 7.3
Bw -- 33 to 60 in	sandy loam	moderately rapid	3.21 to 4.55 in	6.1 to 7.3
2BC -- 60 to 80 in	loamy sand	rapid	1.00 to 2.01 in	6.1 to 7.8

Zumbro, occasionally flooded

Extent: 15 to 35 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 3 percent
Parent material: sandy alluvium
Restrictive feature(s): greater than 60 inches
Flooding: occasional
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) .15
Land capability, nonirrigated: 3s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 8 in	loamy sand	rapid	0.71 to 0.87 in	5.6 to 7.3
A -- 8 to 27 in	loamy sand	rapid	1.74 to 2.12 in	5.6 to 7.3
AB -- 27 to 40 in	loamy sand	rapid	1.17 to 1.43 in	5.6 to 7.3
Bw -- 40 to 50 in	loamy sand	rapid	0.49 to 0.98 in	6.1 to 7.3
C -- 50 to 60 in	sand	very rapid	0.20 to 0.69 in	6.1 to 7.8

N623B--Burkhardt sandy loam, 0 to 6 percent slopes

Burkhardt

Extent: 75 to 95 percent of the unit
Landform(s): terraces
Slope gradient: 0 to 6 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 10 in	sandy loam	moderately rapid	1.18 to 1.38 in	5.1 to 7.3
Bt -- 10 to 14 in	sandy loam	moderately rapid	0.52 to 0.82 in	5.1 to 6.5
2Bt -- 14 to 47 in	loamy sand	rapid	0.65 to 3.27 in	5.1 to 6.5
2BC -- 47 to 58 in	sand	very rapid	0.22 to 1.10 in	5.1 to 6.5
2C -- 58 to 80 in	stratified gravelly coarse sand to sand	very rapid	0.44 to 1.54 in	6.1 to 7.8

N624B--Lilah sandy loam, 0 to 6 percent slopes

Lilah

Extent: 75 to 95 percent of the unit
Landform(s): terraces
Slope gradient: 0 to 6 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
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) .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 6 in	sandy loam	moderately rapid	0.71 to 0.83 in	5.1 to 7.3
BA,Bt1 -- 6 to 15 in	gravelly sandy loam	moderately rapid	0.81 to 1.18 in	5.1 to 6.0
2Bt2 -- 15 to 28 in	gravelly loamy sand	very rapid	0.26 to 1.30 in	5.1 to 6.0
2Bt3 -- 28 to 39 in	sand	very rapid	0.22 to 1.10 in	5.1 to 6.0
2C -- 39 to 80 in	loamy sand	very rapid	0.82 to 4.09 in	5.1 to 6.0

N624C2--Lilah sandy loam, 6 to 12 percent slopes, moderately eroded

Lilah, moderately eroded

Extent: 75 to 95 percent of the unit
Landform(s): terraces
Slope gradient: 6 to 12 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
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) .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 6 in	sandy loam	moderately rapid	0.71 to 0.83 in	5.1 to 7.3
BA,Bt1 -- 6 to 15 in	gravelly sandy loam	moderately rapid	0.81 to 1.18 in	5.1 to 6.0
2Bt2 -- 15 to 28 in	gravelly loamy sand	very rapid	0.26 to 1.30 in	5.1 to 6.0
2Bt3 -- 28 to 39 in	sand	very rapid	0.22 to 1.10 in	5.1 to 6.0
2C -- 39 to 80 in	loamy sand	very rapid	0.82 to 4.09 in	5.1 to 6.0

N625B--Coloma loamy sand, 0 to 6 percent slopes

Coloma

Extent: 70 to 90 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 0 to 6 percent
Parent material: sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .15
Land capability, nonirrigated: 4s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 4 in	loamy sand	rapid	0.35 to 0.43 in	5.1 to 7.3
Bw -- 4 to 39 in	sand	rapid	1.75 to 3.50 in	5.1 to 6.5
E and Bt -- 39 to 80 in	stratified sand to loamy sand	rapid	2.05 to 4.09 in	5.1 to 6.5

N626C--Plainfield loamy sand, 6 to 12 percent slopes

Plainfield

Extent: 70 to 95 percent of the unit
Landform(s): terraces
Slope gradient: 6 to 12 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .15
Land capability, nonirrigated: 6s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	loamy sand	rapid	0.64 to 0.78 in	5.1 to 7.3
Bw -- 7 to 28 in	sand	very rapid	0.42 to 2.09 in	5.1 to 6.5
BC,C -- 28 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.64 to 2.23 in	5.1 to 6.5

N626D--Plainfield loamy sand, 12 to 18 percent slopes

Plainfield

Extent: 70 to 90 percent of the unit
Landform(s): terraces
Slope gradient: 12 to 18 percent
Parent material: sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 5
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .15
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 7 in	loamy sand	rapid	0.64 to 0.78 in	5.1 to 7.3
Bw -- 7 to 28 in	sand	very rapid	0.42 to 2.09 in	5.1 to 6.5
BC,C -- 28 to 60 in	stratified gravelly coarse sand to sand	very rapid	0.64 to 2.23 in	5.1 to 6.5

N627A--Billett fine sandy loam, 0 to 4 percent slopes

Billett

Extent: 80 to 100 percent of the unit
Landform(s): terraces
Slope gradient: 0 to 4 percent
Parent material: coarse-loamy sediment over sandy outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 3
Wind erodibility index (WEI): 86
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 9 in	fine sandy loam	moderately rapid	1.36 to 1.54 in	5.6 to 7.3
Bt -- 9 to 34 in	fine sandy loam	moderately rapid	2.98 to 4.71 in	5.1 to 6.5
2Bw1 -- 34 to 58 in	sand	rapid	1.20 to 2.40 in	5.1 to 6.5
2Bw2 -- 58 to 65 in	sand	rapid	0.35 to 0.71 in	5.1 to 6.5
2C -- 65 to 80 in	sand	very rapid	0.30 to 1.05 in	6.1 to 7.8

N628A--Burkhardt sandy loam, very gravelly substratum, 0 to 3 percent slopes

Burkhardt, very gravelly substratum

Extent: 85 to 95 percent of the unit
Landform(s): terraces
Slope gradient: 0 to 3 percent
Parent material: coarse-loamy sediments over sandy and gravelly outwash
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
Drainage class: somewhat excessively drained

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

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 13 in	sandy loam	moderately rapid	1.56 to 1.82 in	5.1 to 7.3
Bt -- 13 to 19 in	sandy loam	moderately rapid	0.47 to 1.12 in	5.1 to 6.5
2Bt -- 19 to 24 in	very gravelly loamy sand	very rapid	0.10 to 0.41 in	5.6 to 6.5
2BC -- 24 to 37 in	very gravelly sand	very rapid	0.13 to 1.04 in	5.6 to 6.5
2C1 -- 37 to 60 in	stratified gravelly sand to very gravelly coarse sand	very rapid	0.23 to 1.37 in	5.6 to 7.8
2C2 -- 60 to 80 in	stratified gravelly sand to very gravelly coarse sand	very rapid	0.20 to 1.20 in	6.6 to 7.8

N629F--Mt. Carroll and Timula soils, 20 to 40 percent slopes

Timula

Extent: 0 to 65 percent of the unit
Landform(s): valley sides
Slope gradient: 20 to 40 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.18 to 1.42 in	6.1 to 7.8
Bt -- 6 to 15 in	silt loam	moderate	1.63 to 1.81 in	6.1 to 7.8
Bw -- 15 to 28 in	silt loam	moderate	2.34 to 2.60 in	6.1 to 7.8
C -- 28 to 80 in	silt loam	moderate	9.35 to 10.39 in	7.4 to 8.4

Mt. Carroll

Extent: 0 to 65 percent of the unit
Landform(s): valley sides
Slope gradient: 20 to 40 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
Bt -- 8 to 24 in	silt loam	moderate	3.23 to 3.55 in	5.1 to 7.3
Bw -- 24 to 46 in	silt loam	moderate	4.41 to 4.85 in	5.6 to 7.8
BC -- 46 to 60 in	silt loam	moderate	2.48 to 2.76 in	7.4 to 8.4
C -- 60 to 80 in	silt loam	moderate	3.61 to 4.02 in	7.4 to 8.4

N630B--Schapville-Shullsburg complex, 2 to 6 percent slopes

Schapville

Extent: 40 to 75 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
AB -- 8 to 12 in	silt loam	moderate	0.87 to 0.94 in	5.6 to 7.3
Bt -- 12 to 22 in	silty clay loam	moderate	2.05 to 2.25 in	5.6 to 7.3
2Bt -- 22 to 25 in	silty clay	slow	0.25 to 0.38 in	5.6 to 7.8
2Cr -- 25 to 60 in	weathered bedrock	slow		

Shullsburg

Extent: 15 to 35 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 2e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 17 in	silt loam	moderate	3.72 to 4.06 in	5.6 to 7.3
Bt -- 17 to 26 in	silty clay loam	moderate	1.81 to 1.99 in	5.6 to 7.3
2Bt2 -- 26 to 37 in	clay	slow	0.88 to 1.32 in	6.6 to 7.8
2Cr -- 37 to 60 in	weathered bedrock	slow		

N630C2--Schapville-Shullsburg complex, 6 to 12 percent slopes, moderately eroded

Schapville, moderately eroded

Extent: 40 to 75 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
AB -- 8 to 12 in	silt loam	moderate	0.87 to 0.94 in	5.6 to 7.3
Bt -- 12 to 22 in	silty clay loam	moderate	2.05 to 2.25 in	5.6 to 7.3
2Bt -- 22 to 25 in	silty clay	slow	0.25 to 0.38 in	5.6 to 7.8
2Cr -- 25 to 60 in	weathered bedrock	slow		

Shullsburg, moderately eroded

Extent: 15 to 35 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: somewhat poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: C
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 17 in	silt loam	moderate	3.72 to 4.06 in	5.6 to 7.3
Bt -- 17 to 26 in	silty clay loam	moderate	1.81 to 1.99 in	5.6 to 7.3
2Bt2 -- 26 to 37 in	clay	slow	0.88 to 1.32 in	6.6 to 7.8
2Cr -- 37 to 60 in	weathered bedrock	slow		

N631D2--Schapville silt loam, 12 to 18 percent slopes, moderately eroded

Schapville, moderately eroded

Extent: 30 to 85 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
AB -- 8 to 12 in	silt loam	moderate	0.87 to 0.94 in	5.6 to 7.3
Bt -- 12 to 22 in	silty clay loam	moderate	2.05 to 2.25 in	5.6 to 7.3
2Bt -- 22 to 25 in	silty clay	slow	0.25 to 0.38 in	5.6 to 7.8
2Cr -- 25 to 60 in	weathered bedrock	slow		

N631E--Schapville silt loam, 18 to 35 percent slopes

Schapville

Extent: 40 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
AB -- 8 to 12 in	silt loam	moderate	0.87 to 0.94 in	5.6 to 7.3
Bt -- 12 to 22 in	silty clay loam	moderate	2.05 to 2.25 in	5.6 to 7.3
2Bt -- 22 to 25 in	silty clay	slow	0.25 to 0.38 in	5.6 to 7.8
2Cr -- 25 to 60 in	weathered bedrock	slow		

N632G--Brodale, flaggy-Schapville complex, 18 to 80 percent slopes

Brodale, flaggy

Extent: 15 to 55 percent of the unit
Landform(s): valley sides
Slope gradient: 20 to 80 percent
Parent material: loamy-skeletal colluvium
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): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .20
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 12 in	channery loam	moderate	1.54 to 2.01 in	6.6 to 8.4
C -- 12 to 60 in	very flaggy loam	moderately rapid	3.36 to 7.20 in	7.4 to 8.4

Schapville

Extent: 15 to 30 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
AB -- 8 to 12 in	silt loam	moderate	0.87 to 0.94 in	5.6 to 7.3
Bt -- 12 to 22 in	silty clay loam	moderate	2.05 to 2.25 in	5.6 to 7.3
2Bt -- 22 to 25 in	silty clay	slow	0.25 to 0.38 in	5.6 to 7.8
2Cr -- 25 to 60 in	weathered bedrock	slow		

N633C2--Massbach silt loam, 6 to 12 percent slopes, moderately eroded

Massbach, moderately eroded

Extent: 50 to 80 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 40 to 60 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E -- 7 to 11 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 7.3
BE,Bt -- 11 to 39 in	silty clay loam	moderate	5.59 to 6.15 in	5.6 to 7.3
2Bt -- 39 to 46 in	silty clay	slow	0.57 to 1.28 in	6.1 to 7.8
2Cr -- 46 to 60 in	weathered bedrock	slow		

N633D2--Massbach silt loam, 12 to 18 percent slopes, moderately eroded

Massbach, moderately eroded

Extent: 35 to 90 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 40 to 60 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E -- 7 to 11 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 7.3
BE,Bt -- 11 to 39 in	silty clay loam	moderate	5.59 to 6.15 in	5.6 to 7.3
2Bt -- 39 to 46 in	silty clay	slow	0.57 to 1.28 in	6.1 to 7.8
2Cr -- 46 to 60 in	weathered bedrock	slow		

N634E--Massbach-Schapville complex, 18 to 35 percent slopes

Massbach

Extent: 25 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 40 to 60 inche
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 7 in	silt loam	moderate	1.56 to 1.70 in	5.6 to 7.3
E -- 7 to 11 in	silt loam	moderate	0.79 to 0.87 in	5.6 to 7.3
BE,Bt -- 11 to 39 in	silty clay loam	moderate	5.59 to 6.15 in	5.6 to 7.3
2Bt -- 39 to 46 in	silty clay	slow	0.57 to 1.28 in	6.1 to 7.8
2Cr -- 46 to 60 in	weathered bedrock	slow		

Schapville

Extent: 15 to 65 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess over residuum over shale bedrock
Restrictive feature(s): paralithic bedrock at 20 to 40 inche
Flooding: none
Ponding: none
Drainage class: moderately well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
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 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
AB -- 8 to 12 in	silt loam	moderate	0.87 to 0.94 in	5.6 to 7.3
Bt -- 12 to 22 in	silty clay loam	moderate	2.05 to 2.25 in	5.6 to 7.3
2Bt -- 22 to 25 in	silty clay	slow	0.25 to 0.38 in	5.6 to 7.8
2Cr -- 25 to 60 in	weathered bedrock	slow		

N635B--Frankville-Nasset-Downs complex, 2 to 6 percent slopes

Frankville

Extent: 30 to 70 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 2 to 6 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt -- 14 to 23 in	silty clay loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt -- 23 to 28 in	clay	slow	0.41 to 0.61 in	6.1 to 7.3
3R -- 28 to 80 in	weathered bedrock	moderately slow		

Nasset

Extent: 15 to 40 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
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 -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silty clay loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

N635B--Frankville-Nasset-Downs complex, 2 to 6 percent slopes

Downs

Extent: 15 to 30 percent of the unit
Landform(s): hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

N635C2--Frankville-Nasset-Downs complex, 6 to 12 percent slopes, moderately eroded

Frankville, moderately eroded

Extent: 30 to 70 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 6 to 12 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE --	6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt --	14 to 23 in	silty clay loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt --	23 to 28 in	clay	slow	0.41 to 0.61 in	6.1 to 7.3
3R --	28 to 80 in	weathered bedrock	moderately slow		

N635C2--Frankville-Nasset-Downs complex, 6 to 12 percent slopes, moderately eroded

Nasset, moderately eroded

Extent: 15 to 40 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silty clay loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

Downs, moderately eroded

Extent: 15 to 30 percent of the unit
Landform(s): hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 3e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

N635C2--Frankville-Nasset-Downs complex, 6 to 12 percent slopes, moderately eroded

N635D2--Frankville-Nasset-Downs complex, 12 to 18 percent slopes, moderately eroded

Frankville, moderately eroded

Extent: 30 to 70 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 12 to 18 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:

		Texture	Permeability	Available water capacity	pH
Ap --	0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE --	6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt --	14 to 23 in	silty clay loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt --	23 to 28 in	clay	slow	0.41 to 0.61 in	6.1 to 7.3
3R --	28 to 80 in	weathered bedrock	moderately slow		

N635D2--Frankville-Nasset-Downs complex, 12 to 18 percent slopes, moderately eroded

Nasset, moderately eroded

Extent: 15 to 40 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 4e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silty clay loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

Downs, moderately eroded

Extent: 15 to 30 percent of the unit
Landform(s): hills
Slope gradient: 12 to 18 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 4e
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	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

N635D2--Frankville-Nasset-Downs complex, 12 to 18 percent slopes, moderately eroded

N635E--Frankville-Nasset-Downs complex, 18 to 35 percent slopes

Frankville

Extent: 20 to 70 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 18 to 35 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt -- 14 to 23 in	silty clay loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt -- 23 to 28 in	clay	slow	0.41 to 0.61 in	6.1 to 7.3
3R -- 28 to 80 in	weathered bedrock	moderately slow		

Nasset

Extent: 15 to 65 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silty clay loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

N635E--Frankville-Nasset-Downs complex, 18 to 35 percent slopes

Downs

Extent: 5 to 15 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess
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) .37
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 8 in	silt loam	moderate	1.73 to 1.89 in	5.6 to 7.3
E,BE -- 8 to 17 in	silt loam	moderate	1.81 to 1.99 in	5.6 to 7.3
Bt -- 17 to 39 in	silty clay loam	moderate	4.41 to 4.85 in	5.1 to 6.5
BC,C -- 39 to 60 in	silt loam	moderate	4.17 to 4.59 in	5.1 to 7.8

N636A--Houghton muck, ponded, 0 to 1 percent slopes

Houghton, ponded

Extent: 70 to 90 percent of the unit
Landform(s): depressions on stream terraces
Slope gradient: 0 to 1 percent
Parent material: organic material
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: frequent
Drainage class: very poorly drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .02
Land capability, nonirrigated: 8w
Hydric soil: yes
Hydrologic group: D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 80 in	muck	moderately rapid	27.97 to 35.96 in	

N637B--Klossner muck, seepy, 1 to 8 percent slopes

Klossner, seepy

Extent: 60 to 90 percent of the unit
Landform(s): seeps on hills
Slope gradient: 1 to 8 percent
Parent material: organic material overlying loamy sediments
Restrictive feature(s): greater than 60 inches
Flooding: none
Ponding: none
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: 8w
Hydric soil: yes
Hydrologic group: A/D
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Oa -- 0 to 26 in	muck	moderately rapid	9.09 to 11.69 in	
2A1 -- 26 to 36 in	mucky silty clay loam	moderate	2.17 to 2.36 in	
2A2 -- 36 to 48 in	silty clay loam	moderate	2.07 to 2.69 in	5.6 to 7.4
2Cg1 -- 48 to 65 in	clay loam	moderately slow	2.54 to 3.22 in	6.1 to 8.4
2Cg2 -- 65 to 80 in	loam	moderately slow	2.24 to 2.84 in	6.1 to 8.4

N638G--Brodale, flaggy-Bellechester complex, 30 to 70 percent slopes

Brodale, flaggy

Extent: 20 to 75 percent of the unit
Landform(s): valley sides
Slope gradient: 30 to 70 percent
Parent material: loamy colluvium
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): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .20
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 12 in	channery loam	moderate	1.54 to 2.01 in	6.6 to 8.4
C -- 12 to 60 in	very flaggy loam	moderately rapid	3.36 to 7.20 in	7.4 to 8.4

Bellechester

Extent: 15 to 30 percent of the unit
Landform(s): valley sides
Slope gradient: 30 to 70 percent
Parent material: sandy colluvium and/or residuum
Restrictive feature(s): paralithic bedrock at 40 to 60 inche
Flooding: none
Ponding: none
Drainage class: excessively drained

Soil loss tolerance (T factor): 4
Wind erodibility group (WEG): 2
Wind erodibility index (WEI): 134
Kw factor (surface layer) .15
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: A
Potential for frost action: low

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 16 in	loamy sand	rapid	1.61 to 2.26 in	6.1 to 7.8
Bw,BC -- 16 to 42 in	sand	rapid	1.04 to 2.08 in	6.6 to 8.4
Cr -- 42 to 60 in	weathered bedrock	moderate		

N639F--Frontenac-Lacrescent complex, 20 to 45 percent slopes

Frontenac

Extent: 20 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 20 to 45 percent
Parent material: loamy sediments over loamy-skeletal colluvium
Restrictive feature(s): greater than 60 inches
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) .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,AB -- 0 to 12 in	silt loam	moderate	2.60 to 2.83 in	5.6 to 7.3
Bw -- 12 to 30 in	silt loam	moderate	3.08 to 3.98 in	5.6 to 7.3
2C -- 30 to 80 in	very channery loam	moderately rapid	3.00 to 8.00 in	6.6 to 7.8

Lacrescent

Extent: 15 to 60 percent of the unit
Landform(s): valley sides
Slope gradient: 20 to 45 percent
Parent material: silty and loamy sediments over loamy-skeletal colluvium
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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
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 10 in	silt loam	moderate	2.17 to 2.36 in	6.1 to 7.3
AB -- 10 to 17 in	channery silt loam	moderate	1.20 to 1.35 in	6.1 to 7.3
2Bw -- 17 to 28 in	very channery silt loam	moderately rapid	0.77 to 1.76 in	6.1 to 7.3
2C -- 28 to 60 in	very channery silt loam	moderately rapid	2.23 to 5.10 in	7.4 to 7.8

N639G--Frontenac-Lacrescent complex, 30 to 70 percent slopes

Frontenac

Extent: 20 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 30 to 70 percent
Parent material: loamy sediments over loamy-skeletal colluvium
Restrictive feature(s): greater than 60 inches
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) .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,AB -- 0 to 12 in	silt loam	moderate	2.60 to 2.83 in	5.6 to 7.3
Bw -- 12 to 30 in	silt loam	moderate	3.08 to 3.98 in	5.6 to 7.3
2C -- 30 to 80 in	very channery loam	moderately rapid	3.00 to 8.00 in	6.6 to 7.8

Lacrescent

Extent: 15 to 60 percent of the unit
Landform(s): valley sides
Slope gradient: 30 to 70 percent
Parent material: silty and loamy sediments over loamy-skeletal colluvium
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): 6
Wind erodibility index (WEI): 48
Kw factor (surface layer) .28
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 10 in	silt loam	moderate	2.17 to 2.36 in	6.1 to 7.3
AB -- 10 to 17 in	channery silt loam	moderate	1.20 to 1.35 in	6.1 to 7.3
2Bw -- 17 to 28 in	very channery silt loam	moderately rapid	0.77 to 1.76 in	6.1 to 7.3
2C -- 28 to 60 in	very channery silt loam	moderately rapid	2.23 to 5.10 in	7.4 to 7.8

N640G--Lacrescent, flaggy-Frontenac-Rock outcrop complex, 45 to 90 percent slopes

Lacrescent, flaggy

Extent: 20 to 80 percent of the unit
Landform(s): valley sides
Slope gradient: 45 to 90 percent
Parent material: silty and loamy sediments over loamy-skeletal colluvium
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): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .20
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,AB -- 0 to 17 in	flaggy silt loam	moderate	3.05 to 3.72 in	6.6 to 7.3
2Bw -- 17 to 28 in	very channery silt loam	moderately rapid	0.88 to 1.65 in	6.1 to 7.3
2C -- 28 to 60 in	very channery silt loam	moderately rapid	2.23 to 5.10 in	7.4 to 7.8

Frontenac

Extent: 15 to 45 percent of the unit
Landform(s): valley sides
Slope gradient: 45 to 90 percent
Parent material: loamy sediments over loamy-skeletal colluvium
Restrictive feature(s): greater than 60 inches
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) .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,AB -- 0 to 12 in	silt loam	moderate	2.60 to 2.83 in	5.6 to 7.3
Bw -- 12 to 30 in	silt loam	moderate	3.08 to 3.98 in	5.6 to 7.3
2C -- 30 to 80 in	very channery loam	moderately rapid	3.00 to 8.00 in	6.6 to 7.8

N640G--Lacrescent, flaggy-Frontenac-Rock outcrop complex, 45 to 90 percent slopes

Rock outcrop

Extent: 5 to 15 percent of the unit
Landform(s): valley sides
Slope gradient:
Parent material:
Restrictive feature(s): lithic bedrock
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: 8
Hydric soil: no
Hydrologic group:
Potential for frost action:

Representative soil profile:

Texture	Permeability	Available water capacity	pH

N641F--Brodale channery loam, 20 to 45 percent slopes, flaggy

Brodale, flaggy

Extent: 55 to 85 percent of the unit
Landform(s): valley sides
Slope gradient: 20 to 45 percent
Parent material: loamy-skeletal colluvium
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): 8
Wind erodibility index (WEI): 0
Kw factor (surface layer) .20
Land capability, nonirrigated: 7s
Hydric soil: no
Hydrologic group: B
Potential for frost action: moderate

Representative soil profile:

	Texture	Permeability	Available water capacity	pH
A -- 0 to 12 in	flaggy loam	moderate	1.54 to 2.01 in	6.6 to 8.4
C -- 12 to 60 in	very flaggy loam	moderately rapid	3.36 to 7.20 in	7.4 to 8.4

N642E--Frankville-Nasset complex, Oneota formation, 18 to 35 percent slopes

Frankville, oneota formation

Extent: 20 to 70 percent of the unit
Landform(s): -- error in exists on --
Slope gradient: 18 to 35 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 20 to 40 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 2
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 14 in	silt loam	moderate	1.65 to 1.82 in	5.6 to 7.3
Bt -- 14 to 23 in	silt loam	moderate	1.73 to 1.91 in	5.6 to 7.3
2Bt -- 23 to 28 in	clay	slow	0.41 to 0.61 in	6.1 to 7.3
3R -- 28 to 80 in	weathered bedrock	moderately slow		

Nasset, oneota formation

Extent: 15 to 60 percent of the unit
Landform(s): valley sides
Slope gradient: 18 to 35 percent
Parent material: loess over clayey residuum over limestone bedrock
Restrictive feature(s): lithic bedrock at 40 to 60 inches
Flooding: none
Ponding: none
Drainage class: well drained

Soil loss tolerance (T factor): 3
Wind erodibility group (WEG): 5
Wind erodibility index (WEI): 56
Kw factor (surface layer) .32
Land capability, nonirrigated: 6e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
A -- 0 to 6 in	silt loam	moderate	1.30 to 1.42 in	5.6 to 7.3
BE -- 6 to 12 in	silt loam	moderate	1.18 to 1.30 in	5.6 to 7.3
Bt -- 12 to 37 in	silt loam	moderate	5.04 to 5.54 in	5.1 to 6.5
2Bt -- 37 to 44 in	clay	slow	0.57 to 0.85 in	6.6 to 7.3
3R -- 44 to 60 in	weathered bedrock	moderately slow		

N642E--Frankville-Nasset complex, Oneota formation, 18 to 35 percent slopes

N643B--Port Byron-Dinsmore complex, 2 to 6 percent slopes

Port Byron

Extent: 15 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess
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) .32
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 13 in	silt loam	moderate	2.86 to 3.12 in	5.6 to 7.3
BA,Bw -- 13 to 52 in	silt loam	moderate	7.80 to 8.57 in	5.6 to 7.3
BC -- 52 to 59 in	silt loam	moderate	1.42 to 1.56 in	5.6 to 7.8
C -- 59 to 80 in	silt loam	moderate	3.76 to 4.17 in	5.6 to 8.4

Dinsmore

Extent: 15 to 75 percent of the unit
Landform(s): loess hills
Slope gradient: 2 to 6 percent
Parent material: loess over loamy 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) .32
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 11 in	silt loam	moderate	2.43 to 2.65 in	5.6 to 7.3
Bt -- 11 to 40 in	silt loam	moderate	5.83 to 6.41 in	5.6 to 7.3
BC -- 40 to 50 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.8
2C -- 50 to 80 in	loam	moderately slow	4.79 to 5.69 in	6.1 to 8.3

N643C2--Port Byron-Dinsmore complex, 6 to 12 percent slopes, moderately eroded

Port Byron, moderately eroded

Extent: 20 to 80 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess
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) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 13 in	silt loam	moderate	2.86 to 3.12 in	5.6 to 7.3
BA,Bw -- 13 to 52 in	silt loam	moderate	7.80 to 8.57 in	5.6 to 7.3
BC -- 52 to 59 in	silt loam	moderate	1.42 to 1.56 in	5.6 to 7.8
C -- 59 to 80 in	silt loam	moderate	3.76 to 4.17 in	5.6 to 8.4

Dinsmore, moderately eroded

Extent: 15 to 75 percent of the unit
Landform(s): loess hills
Slope gradient: 6 to 12 percent
Parent material: loess over loamy 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) .32
Land capability, nonirrigated: 3e
Hydric soil: no
Hydrologic group: B
Potential for frost action: high

Representative soil profile:	*Texture*	*Permeability*	*Available water capacity*	*pH*
Ap,A -- 0 to 11 in	silt loam	moderate	2.43 to 2.65 in	5.6 to 7.3
Bt -- 11 to 40 in	silt loam	moderate	5.83 to 6.41 in	5.6 to 7.3
BC -- 40 to 50 in	silt loam	moderate	1.97 to 2.17 in	5.6 to 7.8
2C -- 50 to 80 in	loam	moderately slow	4.79 to 5.69 in	6.1 to 8.3

Map Unit Description (MN)

Goodhue County, Minnesota

N644A--Abscota loamy sand, 0 to 3 percent slopes, occasionally flooded

Abscota, occasionally flooded

Extent: 60 to 85 percent of the unit
Landform(s): flood plains
Slope gradient: 0 to 3 percent
Parent material: sandy 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): 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*
A -- 0 to 5 in	loamy sand	rapid	0.46 to 0.56 in	5.6 to 7.3
Bw -- 5 to 14 in	loamy sand	rapid	0.45 to 1.00 in	5.6 to 7.8
C -- 14 to 60 in	sand	very rapid	0.91 to 4.57 in	6.1 to 7.8

W--Water

Water

Extent: 100 percent of the unit
Landform(s):
Slope gradient:
Parent material:
Restrictive feature(s): greater than 60 inches
Flooding:
Ponding:
Drainage class:

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

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

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.