Technical Guide Section II Soil Desscriptions-Nontechnical Page 1 OF 14

#### Nontechnical Soil Descriptions

# Ogemaw County, Michigan

Nontechnical soil descriptions describe soil properties to a soil map unit or group of map units, shown in the NonTechnical Descriptions report. These descriptions are written in terminology that Non-technical users of soil survey information can understand.

10B - Grayling Sand, 0 To 6 Percent Slopes

The Grayling soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, deltas and lake plains. The permeability is rapid. The available water capacity is low. The surface runoff is slow or very slow.

10C - Grayling Sand, 6 To 18 Percent Slopes

The Grayling soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, deltas and lake plains. The permeability is rapid. The available water capacity is low. The surface runoff is slow or very slow.

10E - Grayling Sand, 18 To 35 Percent Slopes

The Grayling soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, deltas and lake plains. The permeability is rapid. The available water capacity is low. The surface runoff is slow or very slow.

11B - Rubicon Sand, 0 To 6 Percent Slopes

The Rubicon soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, stream terraces, moraines, old beach ridges and sand dunes. The permeability is rapid. The available water capacity is low. The surface runoff is slow.

11C - Rubicon Sand, 6 To 18 Percent Slopes

The Rubicon soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, stream terraces, moraines, old beach ridges and sand dunes. The permeability is rapid. The available water capacity is low. The surface runoff is slow.

11E - Rubicon Sand, 18 To 35 Percent Slopes

The Rubicon soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, stream terraces, moraines, old beach ridges and sand dunes. The permeability is rapid. The available water capacity is low. The surface runoff is slow.

11F - Rubicon Sand, 35 To 50 Percent Slopes

The Rubicon soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, stream terraces, moraines, old beach ridges and sand dunes. The permeability is rapid. The available water capacity is low. The surface runoff is slow.

12B - Croswell Sand, 0 To 4 Percent Slopes

The Croswell soil is moderately well drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, ground moraines, stream terraces, lake terraces and low dunes. The permeability is rapid. The available water capacity is low. The surface runoff is very slow. The seasonal high water table fluctuates between 2 to 4 feet of the surface during prolonged wet periods.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 2 OF 14

### Nontechnical Soil Descriptions -- Continued

### 13A - Au Gres Sand, 0 To 3 Percent Slopes

The Au Gres soil is somewhat poorly drained. This soil formed in sandy material. It is on stream terraces, glacial outwash plains, lake plains, and ground moraines. The permeability is rapid. The available water capacity is very low. The surface runoff is slow or very slow. The seasonal high water table fluctuates between .5 to 1.5 feet of the surface during prolonged wet periods.

#### 14 - Roscommon Mucky Sand

The Roscommon soil is poorly or very poorly drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains and in glacial drainageways. The permeability is rapid. The available water capacity is low. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

### 17B - Graycalm Sand, 0 To 6 Percent Slopes

The Graycalm soil is somewhat excessively drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial till plains, moraines, lake basins and outwash plains. The permeability is rapid. The available water capacity is low. The surface runoff is very slow to medium depending on the slope.

# 17C - Graycalm Sand, 6 To 18 Percent Slopes

The Graycalm soil is somewhat excessively drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial till plains, moraines, lake basins and outwash plains. The permeability is rapid. The available water capacity is low. The surface runoff is very slow to medium depending on the slope.

### 17E - Graycalm Sand, 18 To 35 Percent Slopes

The Graycalm soil is somewhat excessively drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial till plains, moraines, lake basins and outwash plains. The permeability is rapid. The available water capacity is low. The surface runoff is very slow to medium depending on the slope.

# 18B - Klacking Sand, 0 To 6 Percent Slopes

The Klacking soil is well drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial outwash plains, kames and moraines. The permeability is moderately rapid. The available water capacity is low. The surface runoff is slow to medium depending on slope.

# 18C - Klacking Sand, 6 To 18 Percent Slopes

The Klacking soil is well drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial outwash plains, kames and moraines. The permeability is moderately rapid. The available water capacity is low. The surface runoff is slow to medium depending on slope.

# 18E - Klacking Sand, 18 To 35 Percent Slopes

The Klacking soil is well drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial outwash plains, kames and moraines. The permeability is moderately rapid. The available water capacity is low. The surface runoff is slow to medium depending on slope.

# 20B - Montcalm Loamy Sand, 0 To 6 Percent Slopes

The Montcalm soil is well drained. This soil formed in sandy and loamy deposits with sandy and loamy bands. It is on glacial ground moraines, end moraines, and outwash plains. The permeability is moderately rapid. The available water capacity is low to moderate. The surface runoff is slow or medium depending on the slope.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 3 OF 14

Nontechnical Soil Descriptions -- Continued

20C - Montcalm Loamy Sand, 6 To 18 Percent Slopes

The Montcalm soil is well drained. This soil formed in sandy and loamy deposits with sandy and loamy bands. It is on glacial ground moraines, end moraines, and outwash plains. The permeability is moderately rapid. The available water capacity is low to moderate. The surface runoff is slow or medium depending on the slope.

20E - Montcalm Loamy Sand, 18 To 35 Percent Slopes

The Montcalm soil is well drained. This soil formed in sandy and loamy deposits with sandy and loamy bands. It is on glacial ground moraines, end moraines, and outwash plains. The permeability is moderately rapid. The available water capacity is low to moderate. The surface runoff is slow or medium depending on the slope.

21 - Histosols And Aquents, Ponded

Histosols and Aquents, ponded soils are very poorly drained. These areas are ponded all year, except during extremely dry periods. Histosols formed in organic deposits greater than 16 inches thick over variable material. Aquents formed in sandy and loamy mineral material.

22B - Nester Fine Sandy Loam, 2 To 6 Percent Slopes

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

22B2 - Nester Loam, 2 To 6 Percent Slopes, Eroded

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

22C - Nester Fine Sandy Loam, 6 To 12 Percent Slopes

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

22C2 - Nester Loam, 6 To 12 Percent Slopes, Eroded

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

22D - Nester Fine Sandy Loam, 12 To 18 Percent Slopes

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

22D2 - Nester Loam, 12 To 18 Percent Slopes, Eroded

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

22D3 - Nester Clay Loam, 12 To 25 Percent Slopes, Severely Eroded

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 4 OF 14

Nontechnical Soil Descriptions -- Continued

22E - Nester Fine Sandy Loam, 18 To 35 Percent Slopes

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

22F - Nester Fine Sandy Loam, 35 To 50 Percent Slopes

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

23B - Kawkawlin Loam, O To 4 Percent Slopes

The Kawkawlin soil is somewhat poorly drained. This soil formed in loamy material and is on glacial ground moraines. The permeability is slow. The available water capacity is moderate to high. The surface runoff is slow to medium depending on slope. The seasonal high water table fluctuates between 1 to 2 feet of the surface during prolonged wet periods.

24 - Sims Loam

The Sims soil is poorly or very poorly drained. This soil formed in loamy and clayey material. It is on low glacial ground moraines. The permeability is slow. The available water capacity is moderate to high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

25B - Kent Sandy Loam, 2 To 6 Percent Slopes

The Kent soil is well drained. This soil formed in loamy and clayey material. It is on glacial till plains and moraines. The permeability is slow. The available water capacity is moderate. The surface runoff is medium to rapid depending on slope.

25B2 - Kent Loam, 2 To 6 Percent Slopes, Eroded

The Kent soil is well drained. This soil formed in loamy and clayey material. It is on glacial till plains and moraines. The permeability is slow. The available water capacity is moderate. The surface runoff is medium to rapid depending on slope.

25C - Kent Sandy Loam, 6 To 12 Percent Slopes

The Kent soil is well drained. This soil formed in loamy and clayey material. It is on glacial till plains and moraines. The permeability is slow. The available water capacity is moderate. The surface runoff is medium to rapid depending on slope.

25C2 - Kent Loam, 6 To 12 Percent Slopes, Eroded

The Kent soil is well drained. This soil formed in loamy and clayey material. It is on glacial till plains and moraines. The permeability is slow. The available water capacity is moderate. The surface runoff is medium to rapid depending on slope.

25D - Kent Sandy Loam, 12 To 18 Percent Slopes

The Kent soil is well drained. This soil formed in loamy and clayey material. It is on glacial till plains and moraines. The permeability is slow. The available water capacity is moderate. The surface runoff is medium to rapid depending on slope.

26B - Selkirk Loam, 0 To 4 Percent Slopes

The Selkirk soil is somewhat poorly drained. This soil formed in loamy and clayey materials. It is on glacial till plains and moraines. The permeability is slow. The available water capacity is moderate to high. The surface runoff is slow. The seasonal high water table fluctuates between .5 to 1.5 feet of the surface during prolonged wet periods.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 5 OF 14

### Nontechnical Soil Descriptions -- Continued

# 27 - Pickford Silty Clay Loam

The Pickford soil is poorly or very poorly drained. This soil formed in clayey material. It is on glacial lake plains and moraines. The permeability is very slow. The available water capacity is moderate. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

#### 28 - Udorthents, Loamy, Nearly Level

Udorthents, loamy, nearly level are moderately well drained or well drained. These are areas in which the soil material has been so altered that identification of the soil series is not feasible. Texture ranges from sandy loam to clay loam.

### 29 - Udipsamments, Nearly Level

Udipsamments, nearly level are sandy soils that have been greatly altered by leveling. Also included are areas of cut and fill.

30B - Isabella Loamy Sand, 2 To 6 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

30C - Isabella Loamy Sand, 6 To 12 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

30D - Isabella Loamy Sand, 12 To 18 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

30E - Isabella Loamy Sand, 18 To 35 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

# 32 - Angelica Loam

The Angelica soil is poorly or very poorly drained. This soil is formed loamy material and on glacial ground moraines. The permeability is moderately slow. The available water capacity is moderate. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

36B - Alcona Loamy Fine Sand, 2 To 6 Percent Slopes

The Alcona soil is well drained. This soil formed in sandy and loamy material It is on glacial lake plains, outwash plains, till plains and stream terraces. The permeability is moderate. The available water capacity is moderate or high. The surface runoff is slow or medium depending on the slope.

37A - Ingalls Sand, 0 To 3 Percent Slopes

The Ingalls soil is somewhat poorly drained. This soil formed in sandy deposits 18 to 40 inches thick over stratified sandy and loamy material. It is on glacial lake plains and outwash plains. The permeability is rapid in the upper part of the soil and moderately slow in the lower part. The available water capacity is low to high. The surface runoff is slow or very slow. The seasonal high water table fluctuates between .5 to 1.5 feet of the surface during prolonged wet periods.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 6 OF 14

#### Nontechnical Soil Descriptions -- Continued

### 38 - Tonkey Sandy Loam

The Tonkey soil is poorly or very poorly drained. This soil formed in loamy deposits 18 to 36 inches over stratified loamy and sandy material. It is on glacial lake plains, outwash plains and in glacial drainageways. The permeability is moderately rapid. The available water capacity is moderate or high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

### 39 - Pits, Gravel

Pits, gravel are active gravel pits in which gravel is being excavated. Some excavations are below the water table. The drainage of these areas vary from very poorly drained to excessively drained.

### 42C - Nester-Mancelona Complex, 6 To 12 Percent Slopes

The Mancelona soil is somewhat excessively drained. This soil formed in sandy and loamy deposits 18 to 40 inches thick over sandy or gravelly sand material. It is on glacial moraines, outwash plains, lake plains, deltas, stream terraces, and old beach ridges. The permeability is moderately rapid in the upper part of the soil and very rapid in the lower part. The available water capacity is low. The surface runoff is slow or medium depending on the slope. The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

#### 43B - East Lake Sand, 0 To 6 Percent Slopes

The East Lake soil is somewhat excessively drained. This soil formed in sandy deposits 20 to 40 inches thick over sandy and gravelly material. It is on glacial outwash plains, lake basins, deltas, eskers, and beach ridges. The permeability is rapid. The available water capacity is low or moderate. The surface runoff is very slow or slow depending on the slope.

# 44B - Croswell Sand, Loamy Substratum, 0 To 3 Percent Slopes

The Croswell, loamy substratum soil is moderately well drained. This soil formed in sandy deposits greater than 40 inches thick over loamy material. It is on glacial outwash plains, lake plains, ground moraines, stream terraces and low dunes. The permeability is rapid in the upper part of the soil and moderately slow in the lower part. The available water capacity is low. The surface runoff is very slow. The seasonal high water table fluctuates between 2 to 5 feet of the surface during prolonged wet periods.

# 45 - Wheatley Mucky Loamy Sand

The Wheatley soil is poorly or very poorly drained. This soil formed in sandy and gravelly material. It is on glacial outwash plains, lake plains and valley trains. The permeability is rapid. The available water capacity is low or very low. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

# 46B - Mancelona Sand, 0 To 6 Percent Slopes

The Mancelona soil is somewhat excessively drained. This soil formed in sandy and loamy deposits 18 to 40 inches thick over sandy or gravelly sand material. It is on glacial moraines, outwash plains, lake plains, deltas, stream terraces, and old beach ridges. The permeability is moderately rapid in the upper part of the soil and very rapid in the lower part. The available water capacity is low. The surface runoff is slow or medium depending on the slope.

# 46C - Mancelona Sand, 6 To 18 Percent Slopes

The Mancelona soil is somewhat excessively drained. This soil formed in sandy and loamy deposits 18 to 40 inches thick over sandy or gravelly sand material. It is on glacial moraines, outwash plains, lake plains, deltas, stream terraces, and old beach ridges. The permeability is moderately rapid in the upper part of the soil and very rapid in the lower part. The available water capacity is low. The surface runoff is slow or medium depending on the slope.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 7 OF 14

#### Nontechnical Soil Descriptions -- Continued

### 46E - Mancelona Sand, 18 To 35 Percent Slopes

The Mancelona soil is somewhat excessively drained. This soil formed in sandy and loamy deposits 18 to 40 inches thick over sandy or gravelly sand material. It is on glacial moraines, outwash plains, lake plains, deltas, stream terraces, and old beach ridges. The permeability is moderately rapid in the upper part of the soil and very rapid in the lower part. The available water capacity is low. The surface runoff is slow or medium depending on the slope.

#### 46F - Mancelona Sand, 35 To 50 Percent Slopes

The Mancelona soil is somewhat excessively drained. This soil formed in sandy and loamy deposits 18 to 40 inches thick over sandy or gravelly sand material. It is on glacial moraines, outwash plains, lake plains, deltas, stream terraces, and old beach ridges. The permeability is moderately rapid in the upper part of the soil and very rapid in the lower part. The available water capacity is low. The surface runoff is slow or medium depending on the slope.

### 47A - Gladwin Sand, 0 To 3 Percent Slopes

The Gladwin soil is somewhat poorly drained. This soil formed in sandy and loamy materials. It is on glacial outwash plains, lake plains, valley trains, deltas and low beach ridges. The permeability is moderately rapid in the upper part of the soil and very rapid in the lower part. The available water capacity is low. The surface runoff is slow. The seasonal high water table fluctuates between .5 to 1.5 feet of the surface during prolonged wet periods.

### 48 - Epoufette Mucky Sand

The Epoufette soil is poorly or very poorly drained. This soil formed in sandy and loamy material. It is on glacial outwash plains, lake plains and lake deltas. The permeability is rapid. The available water capacity is low. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

# 49A - Colonville Silt Loam, 0 To 3 Percent Slopes

The Colonville soil is somewhat poorly drained. This soil formed loamy and sandy material. It is on floodplains. The permeability is moderately rapid. The available water capacity is low to high. The surface runoff is slow. The seasonal high water table fluctuates between 1 to 2 feet of the surface during prolonged wet periods. This soil is subject to common floodings for brief periods.

# 50B - Menominee Sand, 0 To 6 Percent Slopes

The Menominee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over loamy material. It is on glacial moraines, till plains, outwash plains and lake plains. The permeability is rapid in the upper part of the soil and moderate or moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow to medium depending on slope.

# 50C - Menominee Sand, 6 To 12 Percent Slopes

The Menominee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over loamy material. It is on glacial moraines, till plains, outwash plains and lake plains. The permeability is rapid in the upper part of the soil and moderate or moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow to medium depending on slope.

# 50D - Menominee Sand, 12 To 18 Percent Slopes

The Menominee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over loamy material. It is on glacial moraines, till plains, outwash plains and lake plains. The permeability is rapid in the upper part of the soil and moderate or moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow to medium depending on slope.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 8 OF 14

### Nontechnical Soil Descriptions -- Continued

50E - Menominee Sand, 18 To 35 Percent Slopes
The Menominee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over
loamy material. It is on glacial moraines, till plains, outwash plains and lake plains. The
permeability is rapid in the upper part of the soil and moderate or moderately slow in the
lower part. The available water capacity is low to moderate. The surface runoff is very slow to
medium depending on slope.

### 51B - Iosco Sand, 0 To 4 Percent Slopes

The Iosco soil is somewhat poorly drained. This soil formed in sandy deposits 20 to 40 inches over loamy material. It is on glacial ground moraines, outwash plains and lake plains. The permeability is rapid in the upper part of the soil and moderate or moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow. The seasonal high water table fluctuates between .5 to 1.5 feet of the surface during prolonged wet periods.

### 52 - Brevort Mucky Loamy Sand

The Brevort soil is poorly or very poorly drained. This soil formed in sandy deposits 20 to 40 inches thick over loamy material. It is on glacial lake plains and moraines. The permeability is rapid or moderately rapid in the upper part of the soil and moderate or moderately slow in the lower part. The available water capacity is low. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

### 53B - Manistee Loamy Sand, 0 To 6 Percent Slopes

The Manistee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over clayey material. It is on glacial lake plains, till plains and ground moraines. The permeability is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow to medium depending on the slope

# 53C - Manistee Loamy Sand, 6 To 12 Percent Slopes

The Manistee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over clayey material. It is on glacial lake plains, till plains and ground moraines. The permeability is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow to medium depending on the slope.

# 53D - Manistee Loamy Sand, 12 To 18 Percent Slopes

The Manistee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over clayey material. It is on glacial lake plains, till plains and ground moraines. The permeability is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow to medium depending on the slope.

# 54B - Allendale Loamy Sand, 0 To 4 Percent Slopes

The Allendale soil is somewhat poorly drained. This soil formed in 20 to 40 inches of sandy deposits over clayey material. It is on glacial lake basins, outwash plains, and ground moraines. The permeability is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow or very slow. The seasonal high water table fluctuates between .5 to 1.5 feet of the surface during prolonged wet periods.

# 57A - Belding Sandy Loam, 0 To 3 Percent Slopes

The Belding soil is somewhat poorly drained. This soil formed in loamy deposits 20 to 40 inches thick over loamy and clayey material. It is on glacial till plains and lake plains. The permeability is moderately rapid in the loamy material and moderately slow in the clayey layers. The surface runoff is slow. The seasonal high water table fluctuates between 0.5 to 1.5 feet of the surface during prolonged wet periods.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 9 OF 14

#### Nontechnical Soil Descriptions -- Continued

#### 63 - Evart Sand

The Evart soil is poorly or very poorly drained. This soil formed in sandy and loamy material on floodplains. The permeability is rapid. The available water capacity is low or moderate. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding. It is also subject to common flooding for brief to long periods.

#### 64B - Melita Sand, 0 To 6 Percent Slopes

The Melita soil is somewhat excessively drained. This soil formed in sandy deposits greater than 40 inches thick over loamy material. It is on glacial ground moraines, outwash plains, lake plains and end moraines. The permeability is rapid in the upper part of the soil and moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow or slow.

### 64C - Melita Sand, 6 To 18 Percent Slopes

The Melita soil is somewhat excessively drained. This soil formed in sandy deposits greater than 40 inches thick over loamy material. It is on glacial ground moraines, outwash plains, lake plains and end moraines. The permeability is rapid in the upper part of the soil and moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow or slow.

#### 65 - Arnheim Silt Loam

The Arnheim soil is poorly drained. This soil formed in loamy and sandy material. It is on floodplains. The permeability is moderate. The available water capacity is low to high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding. It is also subject to common floodings for brief periods.

# 70 - Loxley Peat

The Loxley soil is very poorly drained. This soil formed in organic deposits more than 51 inches thick. It is on glacial lake plains, outwash plains, moraines and floodplains. The permeability is moderately slow to moderately rapid. The available water capacity is very high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

# 71 - Dawson Peat

The Dawson soil is very poorly drained. This soil formed in organic deposits 16 to 51 inches thick over sandy material. It is on glacial lake plains, moraines and outwash plains. The permeability is moderately slow to moderately rapid in the organic material and rapid in the lower sandy material. The available water capacity is high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

# 74 - Cathro Muck

The Cathro soil is very poorly drained. This soil formed in organic deposits 16 to 50 inches thick over loamy material. It is on glacial lake plains, outwash plains and ground moraines. The permeability is moderately slow to moderately rapid in the organic material and moderate or moderately slow in the loamy material. The available water capacity is very high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

# 76 - Lupton Muck

The Lupton soil is very poorly drained. This soil formed in organic deposits more than 51 inches thick. It is on glacial lake plains, outwash plains, till plains and moraines. The permeability is moderately slow to moderately rapid. The available water capacity is high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 10 OF 14

#### Nontechnical Soil Descriptions -- Continued

### 77 - Tawas Mucky Peat

The Tawas soil is very poorly drained. This soil formed in organic deposits 16 to 51 inches thick over sandy material. It is on glacial lake plains, outwash plains and ground moraines. The permeability is moderately slow to moderately rapid in the organic material and rapid in the lower sandy material. The available water capacity is high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

#### 78 - Rondeau Muck

The Rondeau soil is very poorly drained. This soil formed in organic deposits 16 to 50 inches thick over marl deposits. It is on glacial moraines and outwash plains. The permeability is moderately slow to moderately rapid in the organic material and to variable to estimate in the marl. The available water capacity is high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

#### 79 - Grousehaven Muck

The Grousehaven soil is very poorly drained. This soil formed in organic deposits less than 16 inches thick over marl. It is on glacial outwash plains and moraines. The permeability is moderately slow to moderately rapid in the upper part of the soil and slow or very slow in the lower part. The available water capacity is low to very high. The surface runoff is very slow or ponded. The seasonal high water table is at or near the surface during prolonged wet periods. This soil is subject to frequent ponding.

### 82B - Nester-Manistee Complex, 2 To 6 Percent Slopes

The Manistee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over clayey material. It is on glacial lake plains, till plains and ground moraines. The permeability is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow to medium depending on the slope

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

# 82C - Nester-Manistee Complex, 6 To 12 Percent Slopes

The Manistee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over clayey material. It is on glacial lake plains, till plains and ground moraines. The permeability is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow to medium depending on the slope.

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

# 82D - Nester-Manistee Complex, 12 To 18 Percent Slopes

The Manistee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over clayey material. It is on glacial lake plains, till plains and ground moraines. The permeability is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow to medium depending on the slope.

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 11 OF 14

#### Nontechnical Soil Descriptions -- Continued

82E - Nester-Manistee Complex, 18 To 35 Percent Slopes

The Manistee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over clayey material. It is on glacial lake plains, till plains and ground moraines. The permeability is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is low to moderate. The surface runoff is slow to medium depending on the slope.

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

83B - Rubicon-Menominee Sands, 0 To 6 Percent Slopes

The Menominee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over loamy material. It is on glacial moraines, till plains, outwash plains and lake plains. The permeability is rapid in the upper part of the soil and moderate or moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow to medium depending on slope.

The Rubicon soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, stream terraces, moraines, old beach ridges and sand dunes. The permeability is rapid. The available water capacity is low. The surface runoff is slow.

83C - Rubicon-Menominee Sands, 6 To 18 Percent Slopes

The Menominee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over loamy material. It is on glacial moraines, till plains, outwash plains and lake plains. The permeability is rapid in the upper part of the soil and moderate or moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow to medium depending on slope.

The Rubicon soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, stream terraces, moraines, old beach ridges and sand dunes. The permeability is rapid. The available water capacity is low. The surface runoff is slow.

83E - Rubicon-Menominee Sands, 18 To 35 Percent Slopes

The Menominee soil is well drained. This soil formed in sandy deposits 20 to 40 inches over loamy material. It is on glacial moraines, till plains, outwash plains and lake plains. The permeability is rapid in the upper part of the soil and moderate or moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow to medium depending on slope.

The Rubicon soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, stream terraces, moraines, old beach ridges and sand dunes. The permeability is rapid. The available water capacity is low. The surface runoff is slow.

85B - Kent-Selkirk Complex, 0 To 6 Percent Slopes

The Kent soil is well drained. This soil formed in loamy and clayey material. It is on glacial till plains and moraines. The permeability is slow. The available water capacity is moderate. The surface runoff is medium to rapid depending on slope.

The Selkirk soil is somewhat poorly drained. This soil formed in loamy and clayey materials. It is on glacial till plains and moraines. The permeability is slow. The available water capacity is moderate to high. The surface runoff is slow. The seasonal high water table fluctuates between .5 to 1.5 feet of the surface during prolonged wet periods.

86C - Nester-Graycalm Complex, 6 To 12 Percent Slopes

The Graycalm soil is somewhat excessively drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial till plains, moraines, lake basins and outwash plains. The permeability is rapid. The available water capacity is low. The surface runoff is very slow to medium depending on the slope.

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 12 OF 14

### Nontechnical Soil Descriptions -- Continued

86D - Nester-Graycalm Complex, 12 To 18 Percent Slopes

The Graycalm soil is somewhat excessively drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial till plains, moraines, lake basins and outwash plains. The permeability is rapid. The available water capacity is low. The surface runoff is very slow to medium depending on the slope.

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

86E - Nester-Graycalm Complex, 18 To 35 Percent Slopes

The Graycalm soil is somewhat excessively drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial till plains, moraines, lake basins and outwash plains. The permeability is rapid. The available water capacity is low. The surface runoff is very slow to medium depending on the slope.

The Nester soil is well drained. This soil formed in loamy material. It is on glacial ground moraines and end moraines. The permeability is slow. The available water capacity is moderate or high. The surface runoff is slow to rapid depending on the slope.

87C - Isabella-Melita Complex, Burned, 6 To 18 Percent Slopes

The Melita, burned soil is somewhat excessively drained. The surface layer of this soil has been burned. This soil formed in sandy deposits greater than 40 inches thick over loamy material. It is on glacial ground moraines, outwash plains, lake plains and end moraines. The permeability is rapid in the upper part of the soil and moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow or slow. The Isabella, burned soil is well drained. The surface layer of this soil has been burned. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

87E - Isabella-Melita Complex, Burned, 18 To 40 Percent Slopes

The Melita, burned soil is somewhat excessively drained. The surface layer of this soil has been burned. This soil formed in sandy deposits greater than 40 inches thick over loamy material. It is on glacial ground moraines, outwash plains, lake plains and end moraines. The permeability is rapid in the upper part of the soil and moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow or slow. The Isabella, burned soil is well drained. The surface layer of this soil has been burned. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

90C - Rubicon-Montcalm Complex, 6 To 18 Percent Slopes

The Montcalm soil is well drained. This soil formed in sandy and loamy deposits with sandy and loamy bands. It is on glacial ground moraines, end moraines, and outwash plains. The permeability is moderately rapid. The available water capacity is low to moderate. The surface runoff is slow or medium depending on the slope.

The Rubicon soil is excessively drained. This soil formed in sandy material. It is on glacial outwash plains, lake plains, stream terraces, moraines, old beach ridges and sand dunes. The permeability is rapid. The available water capacity is low. The surface runoff is slow.

93C - Klacking-Isabella Complex, 6 To 12 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

The Klacking soil is well drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial outwash plains, kames and moraines. The permeability is moderately rapid. The available water capacity is low. The surface runoff is slow to medium depending on slope.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 13 OF 14

Nontechnical Soil Descriptions--Continued

93D - Klacking-Isabella Complex, 12 To 18 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

The Klacking soil is well drained. This soil formed in sandy deposits with sandy and loamy bands. It is on glacial outwash plains, kames and moraines. The permeability is moderately rapid. The available water capacity is low. The surface runoff is slow to medium depending on slope.

93E - Klacking-Isabella Complex, 18 To 25 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

The Klacking soil is well drained. This soil formed in sandy deposits with sandy and loamy are the surface of the

bands. It is on glacial outwash plains, kames and moraines. The permeability is moderately rapid. The available water capacity is low. The surface runoff is slow to medium depending on slope

94B - Isabella-Montcalm Loamy Sands, 0 To 6 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope. The Montcalm soil is well drained. This soil formed in sandy and loamy deposits with sandy and loamy bands. It is on glacial ground moraines, end moraines, and outwash plains. The permeability is moderately rapid. The available water capacity is low to moderate. The surface

94C - Isabella-Montcalm Loamy Sands, 6 To 18 Percent Slopes

runoff is slow or medium depending on the slope.

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

The Montcalm soil is well drained. This soil formed in sandy and loamy deposits with sandy and loamy bands. It is on glacial ground moraines, end moraines, and outwash plains. The permeability is moderately rapid. The available water capacity is low to moderate. The surface runoff is slow or medium depending on the slope.

94E - Isabella-Montcalm Loamy Sands, 18 To 25 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope.

The Montcalm soil is well drained. This soil formed in sandy and loamy deposits with sandy and loamy bands. It is on glacial ground moraines, end moraines, and outwash plains. The permeability is moderately rapid. The available water capacity is low to moderate. The surface runoff is slow or medium depending on the slope.

97B - Isabella-Melita Complex, O To 6 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope. The Melita soil is somewhat excessively drained. This soil formed in sandy deposits greater than 40 inches thick over loamy material. It is on glacial ground moraines, outwash plains, lake plains and end moraines. The permeability is rapid in the upper part of the soil and

moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow or slow.

Technical Guide Section II Soil Desscriptions-Nontechnical Page 14 OF 14

### Nontechnical Soil Descriptions--Continued

97C - Isabella-Melita Complex, 6 To 18 Percent Slopes

The Isabella soil is well drained. This soil formed in sandy and loamy material. It is on glacial till plains and moraines. The permeability is moderate. The available water capacity is moderate. The surface runoff is slow to rapid depending on slope. The Melita soil is somewhat excessively drained. This soil formed in sandy deposits greater than 40 inches thick over loamy material. It is on glacial ground moraines, outwash plains, lake plains and end moraines. The permeability is rapid in the upper part of the soil and moderately slow in the lower part. The available water capacity is low to moderate. The surface runoff is very slow or slow.