SOIL TYPES OF LAKE COUNTY

Lake County Soil & Water Conservation District
125 East Erie St.
Painesville, OH 44077
Www.lakecountyohio.gov/soil
soil@lakecountyohio.gov

Lake County Soil & Water
Conservation District

Ad ADRIAN MUCK

This deep, level, very poorly drained organic soil is in depressional areas on the lake plain. It is subject to frequent flooding. Slope is generally less than 2 percent. Most areas are elongated in shape and are 5 to 20 acres in size.

This soil has a seasonal high water table near the surface, and the surface is ponded for long periods in winter, spring, and early summer. Permeability is rapid. Rooting depth is strongly influenced by the depth to the water table. The rooting zone is mainly the upper 12 inches. Available water capacity is high, and organic matter content is very high. The organic layers are strongly acid to slightly acid.

Most of the acreage of this soil is in natural vegetation, such as sedges and water-tolerant trees. This soil has poor potential for farming, building sites, and sanitary facilities. Undrained areas have good potential for wetland wildlife habitat. Flooding, wetness, and rapid permeability seriously limit the use of this soil for building sites and sanitary facilities. Sloughing is a concern when making excavations. Some areas provide good sites for dugout ponds or wildlife marshes.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness, floods, & low strength
Dwellings with basements	Severe: wetness, floods, & low strength
Local roads and streets	Severe: wetness, floods, & low strength
Septic tank absorption fields	Severe: wetness & floods
Flooding frequency	Frequent - long duration - Nov. thru May
High water table	Apparent - Nov. thru May at depths of 0 - 1.0 feet
Bedrock depth	Greater than 60 inches

As ALLIS SILT LOAM

This moderately deep, nearly level, poorly drained soil is on broad flats on the lake plain. Slope ranges from 0 to 2 percent. This soil is mainly in two large areas; each is larger than 1,000 acres.

This soil has a seasonal high water table near the surface for long periods in winter, spring and early summer. It is slow to dry in spring. Permeability and runoff are slow. The rooting zone is mainly above the water table. In drained area, the rooting zone is moderately deep. Available water capacity is low. Organic matter content is moderately low.

The surface layer and subsoil are strongly acid or very strongly acid, except where the surface layer has been limed. Seasonal wetness, slow permeability, moderate depth to bedrock, and high shrink-swell potential severely limit use of this soil for building sites and sanitary facilities.

This soil is better suited to home sites without basements than to those with basements. The shale bedrock hinders excavations. Surface drains and storm sewers can be used to remove surface water. Local roads can be improved by using artificial drainage and suitable base material. Extensive drainage is needed for such intensive recreational uses as baseball diamonds and tennis courts. This soil is suited to hiking paths during the drier part of the year.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness, depth to rock
Local roads and streets	Severe: wetness & low strength
Septic tank absorption fields	Severe: depth to rock, wetness, percs slowly
Flooding frequency	None
High water table	Perched - Nov. thru June at depths of 0 - 1.0 feet
Bedrock depth	20 - 40 inches

Bs BEACHES

Beaches consist of sand and gravel washed and re-washed by waves along the shore of Lake Erie. They are partly covered by water during periods of high runoff.

A fairly steep escarpment borders the land side of most beaches. Permeability is very rapid, and available water capacity is very low.

Most beaches are used for recreation, wildlife habitat, and aesthetic or scenic purposes.

Cg CARLISLE MUCK

This deep, level, very poorly drained organic soil is in a marsh. It is subject to frequent flooding. Slope is less than 2 percent. This soil is in one large, elongated area about 800 acres in size.

This soil has water near the surface, and the surface is ponded for long periods. Permeability is moderately rapid in the organic layer and moderately slow in the substratum. The rooting depth is related to the depth of the water table. The rooting zone is mainly the upper 10 to 12 inches. Available water capacity and organic matter content are very high. The organic material is medium acid to neutral.

This soil is used as a natural area with cattails, reeds, sedges, and some water-tolerant trees near the periphery. It has poor potential for most uses other than wetland wildlife habitat. Flooding, wetness, and low strength seriously limit use of this soil for building sites and sanitary facilities. This soil provides good habitat for ducks, muskrats, and other wetland wildlife.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness, low strength, floods
Dwellings with basements	Severe: wetness, low strength, floods
Local roads and streets	Severe: excess humus, wetness, floods
Septic tank absorption fields	Severe: floods, wetness
Flooding frequency	Frequent - long duration - Nov. thru May
High water table	Apparent- Sep. thru June at depths of 0 - 1.0 feet
Bedrock depth	Greater than 60 inches

CoB COLONIE LOAMY FINE SAND

2-6% slopes

This deep, gently sloping, somewhat excessively drained soil is on beach ridges. Most areas are long and narrow in shape and range from 5 to 100 acres in size. Included with this soil in mapping are small areas of moderately well drained Elnora soils in nearly level areas and on the lower part of side slopes. These soils make up 5 to 20 percent of some of the larger areas.

Permeability is rapid, and the soil dries quickly after rains. This causes shallow rooted plants to wilt after a few days without rain. Toots are not restricted. Available water capacity and organic matter content are low. Runoff is slow. The subsoil is strongly acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

This soil is well suited to building sites. Sanitary facilities are limited by the possible contamination of ground water because of seepage. Sloughing is a hazard in excavations. Soil blowing and water erosion are also hazards. As much plant cover as possible should be maintained on the site during construction to reduce erosion. Lawn seedings made during the drier part of the growing season commonly fail. Seeding should be done early in spring; if seeded during dry periods, lawns should be mulched and watered. The sandy surface layer limits most recreational uses.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Slight
Dwellings with basements	Slight
Local roads and streets	Slight
Septic tank absorption fields	Slight
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

CoD COLONIE LOAMY FINE SAND

6-18% slopes

This deep, moderately sloping and moderately steep, somewhat excessively drained soil is on sandy ridges or dunes of postglacial beach ridges. Most areas are long and narrow in shape and range from 5 to 50 acres in size.

Permeability is rapid, and available water capacity is low. This soil dries quickly after rains and is droughty. Roots are not restricted. The organic matter content is low. Runoff is medium. The subsoil is strongly acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

Although slope limits use of this soil for building sites, most areas are good home sites. Soil blowing and water erosion are serious hazards during construction. As much plant cover as possible should be maintained on the site during construction to reduce erosion. Because this soil is droughty, lawns are difficult to maintain. Seeding should be done early in spring; if seeded during dry periods, lawns should be mulched and watered. Sloughing is a hazard in excavations. Sanitary facilities are limited by possible contamination of ground water because of seepage. The sandy surface layer and slope limit most recreational uses.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Moderate: slope
Dwellings with basements	Moderate: slope
Local roads and streets	Moderate: slope
Septic tank absorption fields	Moderate: slope
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

CoF COLONIE LOAMY FINE SAND

25-50% slopes

This deep, very steep, somewhat excessively drained soil is along drainage ways that cut through beach ridges. Most areas are long and narrow in shape and range from 5 to 200 acres in size.

Permeability is rapid, and the soil dries quickly after rains. Available water capacity is low in the deep rooting zone. The organic matter content is low. Runoff is rapid. The surface layer is strongly acid to slightly acid, and the subsoil is strongly acid to neutral.

The very steep slope severely limits use of this soil for building sites and sanitary facilities. The hazard of erosion is very severe if vegetation is removed. Sloughing is a hazard in excavation. Trails in recreational areas should be protected from erosion and established across the slope where possible

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: slope
Dwellings with basements	Severe: slope
Local roads and streets	Severe: slope
Septic tank absorption fields	Severe: slope
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

CtA CONNEAUT SILT LOAM

0-1% slopes

This deep, level, poorly drained soil is the dominant soil on the lake plain. Areas are 0.5 to 1 mile wide. This soil has a seasonal high water table near the surface for long periods in winter, spring, and early summer. It dries and warms slowly in spring. Permeability is slow, and available water capacity is high in the rooting zone. Rooting depth is related to the depth of the water table. The rooting zone is deep in drained areas.

Organic matter content is moderately low. The surface layer and subsoil are very strongly acid to neutral.

Seasonal wetness and slow permeability severely limit use of this soil for building sites and sanitary facilities. Surface drains and storm sewers can be used to remove surface water. Local roads can be improved by using artificial drainage and suitable base material.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: wetness, frost action & low strength
Septic tank absorption fields	Severe: wetness, percs slowly
Flooding frequency	None
High water table	Perched - Nov. thru June at depths of 0 - 1.0 feet
Bedrock depth	Greater than 60 inches

CtB CONNEAUT SILT LOAM

1-4% slopes

This deep, level, poorly drained soil is the dominant soil on the lake plain. Areas are 0.5 to 1 mile wide. This soil has a seasonal high water table near the surface for long periods in winter, spring, and early summer. It dries and warms slowly in spring. Permeability is slow, and available water capacity is high in the rooting zone. Rooting depth is related to the depth of the water table. The rooting zone is deep in drained areas.

Organic matter content is moderately low. The surface layer and subsoil are very strongly acid to neutral.

Seasonal wetness and slow permeability severely limit use of this soil for building sites and sanitary facilities. Surface drains and storm sewers can be used to remove surface water. Local roads can be improved by using artificial drainage and suitable base material.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: wetness, frost action & low strength
Septic tank absorption fields	Severe: wetness, percs slowly
Flooding frequency	None
High water table	Perched - Nov. thru June at depths of 0 - 0.5 feet
Bedrock depth	40 to 60 inches

CwA CONNEAUT SILT LOAM

shale substratum

This deep, nearly level, poorly drained soil is in broad areas on the lake plain. Most areas are long and narrow in shape and range from 10 to 200 acres in size.

In undrained areas, this soil has a perched seasonal high water table near the surface during winter, spring and early summer. Permeability is slow, and available water capacity is moderate in the rooting zone. Runoff is slow. Shale bedrock is at a depth of 40 to 60 inches. This soil dries and warms slowly in spring. Rooting depth is influenced by the water table. The rooting zone is deep in drained areas.

Organic matter content is moderately low. The surface layer and subsoil are very strongly acid to neutral.

Seasonal wetness, depth to bedrock, and slow permeability severely limit use of this soil for building sites and sanitary facilities. The bedrock is rippable. Surface drains and storm sewers can be used to remove surface water. Local roads can be improved by using artificial drainage and suitable base material. Wetness also limits recreation use.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: wetness, frost action & low strength
Septic tank absorption fields	Severe: wetness, percs slowly
Flooding frequency	None
High water table	Perched - Nov. thru June at depths of 0 - 1.0 feet
Bedrock depth	Greater than 60 inches

CxA CONOTTON LOAM

This deep, nearly level, somewhat excessively drained soil is mainly on outwash terraces. A few areas are on post-glacial beach ridges. Most areas are long and narrow in shape and range from 5 to 30 acres in size.

Permeability is rapid, and available water capacity is low in the deep rooting zone. This soil warms early in spring. Runoff is slow. The organic matter content is low. The subsoil is very strongly acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

This soil is suited to building sites. Possible contamination of ground water limits the use for sanitary facilities. Lawn seedings are difficult to establish during the drier part of the year. Seeding should be done early in spring; if seeded during dry periods, lawns should be mulched and watered.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Slight
Dwellings with basements	Slight
Local roads and streets	Moderate: frost action
Septic tank absorption fields	Slight
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

CyB CONOTTON GRAVELLY LOAM

2-6% slopes

This deep, gently sloping, somewhat excessively drained soil is on the upper part of sides and crests of post-glacial beach ridges. Most areas are long and narrow in shape and range from 10 to 30 acres in size.

Permeability is rapid, and available water capacity is low in the deep rooting zone. This soil warms early in spring. Runoff is slow. The organic matter content is low. The subsoil is very strongly acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

This soil is suited to building sites. Possible contamination of ground water limits the use for sanitary facilities. Lawn seedings are difficult to establish during the drier part of the year. Seeding should be done early in spring; if seeded during dry periods, lawns should be mulched and watered.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Slight
Dwellings with basements	Slight
Local roads and streets	Moderate: frost action
Septic tank absorption fields	Slight
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

CyC CONOTTON GRAVELLY LOAM

6-15% slopes

This deep, sloping and moderately steep, somewhat excessively drained soil is on post-glacial beach ridges. Most areas are long and narrow in shape and range from 5 to 15 acres in size.

Permeability is rapid, and available water capacity is low in the deep rooting zone. This soil warms early in spring. Runoff is medium or rapid. The organic matter content is low. The subsoil is very strongly acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

Although slope limits use of this soil for building sites, some areas are good for this use. The possible contamination of ground water limits the use for sanitary facilities. Cover should be maintained on the site as much as possible during construction. Gravel in the surface layer and slope interfere with most recreational uses. Lawn seedings are difficult to establish during the drier part of the growing season. Seeding should be done early in spring; if seeded during dry periods, lawns should be mulched and watered.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Moderate: slope
Dwellings with basements	Moderate: slope
Local roads and streets	Moderate: frost action, slope
Septic tank absorption fields	Moderate: slope
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

DaA DARIEN SILT LOAM

0-1% slopes

This deep, nearly level, somewhat poorly drained soil is on broad flats. Most areas are irregular in shape and are more than 50 acres in size.

In undrained areas, this soil has a perched seasonal high water table near the surface during winter, spring, and other excessively wet periods. Some areas are ponded during these periods. Permeability is slow. Runoff is very slow. Shale and siltstone bedrock is at a depth of 40 to 60 inches. This soil dries and warms slowly in spring.

Rooting depth is influenced by the water table. In spring, the rooting zone is mainly the upper 15 to 20 inches. Roots penetrate to a greater depth as the water table recedes. Available water capacity is moderate. Organic matter content is moderately low. The subsoil is strongly acid or medium acid, but the surface layer varies widely in reaction, depending on the amount of liming.

The seasonal high water table, slow permeability, and depth to bedrock severely limit use of this soil for building site and sanitary facilities. Fill is usually required for construction on this soil. Surface drains and storm sewers can be used to remove surface water. Sanitary facilities should be connected to commercial sewers wherever possible. Wetness also limits the use of this soil for recreation.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, wetness
Septic tank absorption fields	Severe: wetness, percs slowly, depth to rock
Flooding frequency	None
High water table	Perched - Dec. thru May at depths of 0.5 - 1.5 feet
Bedrock depth	40 - 60 inches

DaB DARIEN SILT LOAM

1-4% slopes

This deep, nearly level, and gentle sloping, somewhat poorly drained soil is on slightly convex side slopes. Most areas are irregular in shape and are 20 acres to several hundred acres in size. In undrained areas, this soil has a perched seasonal high water table near the surface during winter, spring, and other excessively wet periods. Some areas are ponded during these periods. Permeability is slow. Runoff is very slow. Shale and siltstone bedrock is at a depth of 40 to 60 inches. This soil dries and warms slowly in spring.

Rooting depth is influenced by the water table. In spring, the rooting zone is mainly the upper 15 to 20 inches. Roots penetrate to a greater depth as the water table recedes. Available water capacity is moderate. Organic matter content is moderately low. The subsoil is strongly acid or medium acid, but the surface layer varies widely in reaction, depending on the amount of liming.

The seasonal high water table, slow permeability, and depth to bedrock severely limit use of this soil for building site and sanitary facilities. The underlying bedrock is mostly rippable. Buildings should be located on the higher parts of the landscape for good surface drainage away from the foundation. Sanitary facilities should be connected to commercial sewers wherever possible. Extensive drainage is needed for intensive recreational uses such as baseball diamonds and tennis courts. This soil is suitable for hiking during the drier part of the year.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, wetness
Septic tank absorption fields	Severe: wetness, percs slowly, depth to rock
Flooding frequency	None
High water table	Perched - Dec. thru May at depths of 0.5 - 1.5 feet
Bedrock depth	40 - 60 inches

DaC DARIEN SILT LOAM

6-12% slopes

This deep, sloping, somewhat poorly drained soil is on hillsides and on side slopes parallel to drainageways. Most areas are 5 to 15 acres in size and elongated in shape.

In undrained areas this soil has a perched seasonal high water table near the surface during winter, spring, and other excessively wet periods. Permeability is slow. Runoff is medium. Shale and siltstone bedrock is at a depth of 40 to 60 inches. This soil dries and warms slowly in spring, the rooting zone is mainly the upper 15 to 20 inches. Roots penetrate to a greater depth as the water table recedes. Available water capacity is moderate. Organic matter content is moderately low. The subsoil is strongly acid or medium acid, but the surface layer varies widely in reaction, as a result of liming.

Seasonal wetness, slow permeability, and depth to bedrock severely limit use of this soil for building sites and sanitary facilities. The bedrock is mostly rippable. Erosion is a hazard during construction. Construction sites should be developed on the contour wherever possible and cover should be maintained on the site as much as possible during construction to reduce erosion.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, wetness
Septic tank absorption fields	Severe: wetness, percs slowly, depth to rock
Flooding frequency	None
High water table	Perched - Dec. thru May at depths of 0.5 - 1.5 feet
Bedrock depth	40 - 60 inches

Dc DUMPS

Covered

These miscellaneous areas consist mostly of broken chunks of cement, bricks and other debris that is mostly nonorganic waste from local construction projects. The fill is calcareous in some areas. Most areas are 2 to 20 acres in size. The depth of the fill varies according to the original landform surface.

These areas commonly do not support plants. Erosion of any existing fine earth material is a hazard unless the area is adequately covered by a suitable soil layer and vegetation is established.

Du DUMPS

chemical waste

These miscellaneous areas consist of industrial settling basins that have collected alkali chemical wastes. These basins are 50 to 100 acres in size and have dikes 20 to 30 feet high. Some basins contain an accumulation of waste to within 2 to 3 feet of the top of the dikes.

Little or no vegetation grows on these waste sites.

ElB ELLSWORTH SILT LOAM

2-6% slopes

This deep, gently sloping, moderately well drained soil is on knolls and on side slopes parallel to drainageways. Most areas are irregular in shape and 5 to 20 acres in size. A perched seasonal high water table is between depths of 1.5 and 3.0 feet during winter, spring, and other excessively wet periods.

This soil dries slowly in spring. Permeability is slow or very slow. Runoff is slow or medium. The rooting zone is moderately deep over glacial till. Available water capacity is moderate. Organic matter content is moderately low. The surface layer and upper part of the subsoil are very strongly acid to mildly alkaline.

Wetness, slow or very slow permeability, and shrink-swell potential limit the use of its soil for building sites and sanitary facilities. This soil is better suited to houses without basements than to those with basements. Good surface drainage should be provided around buildings during landscaping. Cover should be maintained on the site as much as possible during construction to prevent erosion.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Moderate: shrink-swell, wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: low strength, frost action
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Nov. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

Lake County Soil & Water Conservation District
125 East Erie St.
Painesville, OH 44077
Www.lakecountyohio.gov/soil
soil@lakecountyohio.gov

ElC ELLSWORTH SILT LOAM

6-12% slopes

This deep, sloping, moderately well drained soil is on hillsides and on side slopes parallel to drainageways. Most areas are irregular in shape and range from 5 to 20 acres in size. A perched seasonal high water table is between depths of 1.5 and 3.0 feet during winter, spring, and other excessively wet periods.

This soil dries slowly in spring. Permeability is slow or very slow. Runoff is rapid. The rooting zone is moderately deep over glacial till. Available water capacity is moderate. Organic matter content is moderately low. The surface layer and upper part of the subsoil are very strongly acid to neutral, and the lower part of the subsoil is slightly acid to mildly alkaline.

Wetness, slope, slow or very slow permeability, and shrink-swell potential limit the use of this soil for building sites and sanitary facilities. Homes without basements are better suited to this soil than those with basements. Erosion is a serious hazard during construction, so cover should be maintained on the site as much as possible during construction. Trails in recreational areas should be protected from erosion and established across the slope wherever possible. Some areas are suitable sites for ponds.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Moderate: shrink-swell, wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: low strength, frost action
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Nov. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

ElD ELLSWORTH SILT LOAM

12-18% slopes

This deep, moderately steep, moderately well drained soil is on convex hillsides and on side slopes parallel to drainageways. Most areas are irregular in shape and range from 5 to 30 acres in size. A perched seasonal high water table is between depths of 1.5 and 3.0 feet during winter, spring, and other excessively wet periods.

This soil dries slowly in spring. Permeability is low or very slow. Runoff is very rapid. The rooting zone is moderately deep over glacial till. Available water capacity is moderate. Organic matter content is moderately low. The surface layer and upper part of the subsoil is slightly acid to mildly alkaline.

Slow or very slow permeability, season wetness, slope, and shrink-swell potential limit the use of this soil for building sites and sanitary facilities. Erosion is a serious hazard during construction. Housing developments and construction sites should be developed on the contour wherever possible. Trench absorption fields are difficult to lay out and construct. Controlling the downhill flow of effluent is a serious concern.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: slope
Dwellings with basements	Severe: slope, wetness
Local roads and streets	Severe: slope, low strength, frost action
Septic tank absorption fields	Severe: slope, percs slowly, wetness
Flooding frequency	None
High water table	Perched - Nov. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

ElF ELLSWORTH SILT LOAM

25-70% slopes

This deep, very steep, moderately well drained soil is on hillsides and sides of V-shaped valleys formed by deeply entrenched drainageways. Typically, slopes are short. Most areas are long and narrow in shape and generally are larger than 50 acres in size. The water table is generally between depths of 1.5 and 3.0 feet during winter, spring, and other excessively wet periods.

This soil dries slowly in spring. Permeability is slow or very slow. Runoff is very rapid. The rooting zone is moderately deep over glacial till. Available water capacity is moderate. Organic matter content is moderately low. The surface layer and upper part of the subsoil are very strongly acid to neutral, and the lower part of the subsoil is slightly acid to mildly alkaline. This soil is moderately well suited to woodland. The hazard of erosion is severe. The very steep slope limits use of logging equipment.

Construction of buildings and sanitary facilities is very difficult because of the very steep slope. Also, the hazard of erosion is very severe when vegetation is removed. Trails in recreational areas should be protected from erosion and established across the slope wherever possible.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: slope
Dwellings with basements	Severe: slope, wetness
Local roads and streets	Severe: slope, low strength, frost action
Septic tank absorption fields	Severe: slope, percs slowly, wetness
Flooding frequency	None
High water table	Perched - Nov. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

EmC ELLSWORTH SILT LOAM

shale substratum, 6-12% slopes

This deep, sloping, moderately well drained soil is on hillsides. Slopes are mostly less than 500 feet long and are dissected by many drainageways. Most areas are 5 to 50 acres in size. A perched seasonal high water table is between depths of 1.5 and 3.0 feet during winter, spring, and other excessively wet periods.

This soil dries slowly in spring. Permeability is slow. Runoff is rapid. Shale bedrock is at a depth of 40 to 60 inches. The rooting zone is moderately deep over glacial till. Available water capacity is moderate. Organic matter content is moderately low. The subsoil is very strongly acid to slightly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

Seasonal wetness, slope, depth to shale bedrock, low strength, and slow permeability limit the use of this soil as a construction site, the site should be developed on the contour wherever possible. Shale bedrock is at a depth of 40 to 60 inches, and although it is rippable, it hinders excavation. Houses without basements are better suited to this soil than those with basements. Cover should be maintained on the site as much as possible during construction to help to control erosion. Trails in recreational area should be protected from erosion and established across the slope wherever possible.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Moderate: slope, shrink-swell, wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action , low strength
Septic tank absorption fields	Severe: percs slowly, wetness, depth to rock
Flooding frequency	None
High water table	Perched - Nov. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	40 to 60 inches

EmD ELLSWORTH SILT LOAM

Shale substratum, 12-18% slopes

This deep, moderately steep, moderately well drained soil is mainly on side slopes adjacent to major drainageways. Most areas are narrow and winding in shape and range from 5 to 20 acres in size. A perched seasonal high water table is between depths of 1.5 and 3.0 during winter, spring, and other excessively wet periods.

This soil dries slowly in spring. Permeability is slow. Runoff is very rapid. Shale bedrock is at a depth of 40 to 60 inches. The rooting zone is moderate. Organic matter content is moderately low. The subsoil is very strongly acid to slightly acid but the surface layer varies widely in reaction, depending on the amount of liming.

Slow permeability, seasonal wetness, slope, low strength, and depth to shale bedrock limit the use of this soil for building sites and sanitary facilities. Shale bedrock is at a depth of 40 to 60 inches, and although it is rippable, it hinders excavation. Housing developments and construction sites should be developed on the contour wherever possible. Cover should be maintained on the site as much as possible during construction to help to prevent erosion. Trench absorption fields are difficult to lay out and construct. Controlling the downhill flow of effluent is a serious concern.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: slope
Dwellings with basements	Severe: wetness, slope
Local roads and streets	Severe: low strength , slope, frost action
Septic tank absorption fields	Severe: percs slowly, wetness, depth to rock
Flooding frequency	None
High water table	Perched - Nov. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	40 to 60 inches

EnB ELNORA LOAMY FINE SAND

This deep, nearly level and gently sloping, moderately well drained soil is on knolls and low ridges on the lake plain. Most areas are irregular in shape and range from 5 to 100 acres in size.

A seasonal high water table is at a depth of 18 to 24 inches in late winter, spring, and other extended wet periods. Permeability is moderately rapid or rapid. Runoff is slow. Available water capacity is low in the deep rooting zone. Organic matter content is low. The surface layer and subsoil are very strongly acid to slightly acid.

Seasonal wetness and moderately rapid or rapid permeability limit this soil for building sites and sanitary facilities. It is better suited to houses without basements than to those with basements. Because of seepage, contamination of ground water by sanitary facilities is possible. Sloughing is a hazard in excavations. Seeding should be done early in spring; if seeded during dry periods, lawns should be mulched and watered. The sandy surface layer limits recreational use of this soil. This soil is a good source of sand.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Moderate: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Moderate: frost action, wetness
Septic tank absorption fields	Severe: wetness
Flooding frequency	None
High water table	Apparent -Feb. thru May at depths of 1.5 - 2.0 feet
Bedrock depth	Greater than 60 inches

EuA EUCLID SILT LOAM

This deep, nearly level, somewhat poorly drained soil is on broad, low stream terraces adjacent to major streams. It is on positions slightly higher than the adjacent first bottoms, but it is subject to rare flooding. Most areas are long and narrow in shape and range from 5 to 100 acres in size.

This soil has a seasonal high water table near the surface in winter, spring, and other extended wet periods. Permeability is moderately slow. Runoff is slow. Rooting depth is influenced by the depth to the water table. Available water capacity is high in the deep rooting zone. Organic matter content is moderately low. The surface layer and subsoil are very strongly acid to medium acid. This soil is well suited to woodland.

Seasonal wetness and the flooding hazard severely limit the use of this soil for building sites, sanitary facilities, and recreation.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: floods
Dwellings with basements	Severe: floods, wetness
Local roads and streets	Severe: floods, frost action, wetness
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	Rare
High water table	Perched - Nov. thru June at depths of 0.5 - 1.5 feet
Bedrock depth	Greater than 60 inches

Lake County Soil & Water Conservation District
125 East Erie St.
Painesville, OH 44077
Www.lakecountyohio.gov/soil
soil@lakecountyohio.gov

FcA FITCHVILLE SILT LOAM

This deep, nearly level and gently sloping, somewhat poorly drained soil is on old lake beds. Areas are irregular or oval in shape and range from 10 to 100 acres in size.

This soil has a seasonal high water table near the surface for long periods in winter, spring, and early summer. Runoff is slow. Rooting depth is influenced by the water table. The rooting zone is deep in drained areas. Available water capacity is high. Organic matter content is moderately low. The surface layer and subsoil are very strongly acid to medium acid, except where the surface layer has been limed.

The seasonal high water table, moderately slow permeability, and low strength severely limit the use of this soil for sanitary facilities and building sites. Houses without basements are better suited to this soil than those with basements. Storm sewers and ditches can be used to help to control the water table. Local roads can be improved by using artificial drainage and suitable base material.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, low strength, wetness
Septic tank absorption fields	Severe: wetness, percs slowly
Flooding frequency	None
High water table	Perched - Nov. thru June at depths of 0.5 - 1.5 feet
Bedrock depth	Greater than 60 inches

GfA GLENFORD SILT LOAM

0-2% slopes

This deep, nearly level, moderately well drained soil is on long and narrow ridges between entrenched drainageways. Most areas are irregular in shape and 5 to 25 acres in size.

A perched seasonal high water table is between depths of 1.5 and 3.0 feet during winter, spring, and other extended wet periods. Permeability is moderately slow. Runoff is slow. Available water capacity is high in the deep rooting zone. Organic matter content is moderately low. The surface layer is very strongly acid to neutral, and the subsoil is very strongly acid to medium acid.

Seasonal wetness limits the use of this soil for most sanitary facilities and for building sites. This soil is better suited to houses without basements than to those with basements. Local roads can be improved by using artificial drainage and suitable base material. This soil has good potential for such recreational uses as picnic areas and paths and trails.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Moderate: wetness, shrink-swell
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, low strength
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Nov. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

Lake County Soil & Water Conservation District
125 East Erie St.
Painesville, OH 44077
Www.lakecountyohio.gov/soil
soil@lakecountyohio.gov

GfB GLENFORD SILT LOAM

2-6% slopes

This deep, gently sloping, moderately well drained soil commonly is on silty terrace remnants adjacent to the uplands. Most areas are long and narrow in shape and range from 5 to 25 acres in size.

A perched seasonal high water table is between depths of 1.5 and 3.0 feet during winter, spring, and other extended wet periods. Permeability is moderately slow. Runoff is medium. Available water capacity is high in the deep rooting zone. Organic matter content is moderately low. The surface layer is very strongly acid to neutral, and the subsoil is very strongly acid to medium acid.

Seasonal wetness limits the use of this soil for most sanitary facilities and for building sites. This soil is better suited to houses without basements than to those with basements. Local roads can be improved by using artificial drainage and suitable base material. Cover should be maintained on the site as much as possible during construction to reduce erosion. This soil has good potential for such recreational uses as picnic areas and paths and trails.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Moderate: wetness, shrink-swell
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, low strength
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Nov. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

GoF GOSPORT SILTY CLAY LOAM

This moderately deep, well drained, very steep soil is in dissected areas along streams. Most areas are less than one-quarter mile wide, but some areas extend for 1 mile or more along the deeply entrenched valleys. Slope is dominantly 35 to 70 percent but ranges from 25 to 70 percent.

Permeability is slow, and runoff is very rapid. The rooting depth is restricted by shale bedrock at a depth of 20 to 40 inches. Available water capacity and organic matter content are low. The surface layer is slightly acid to extremely acid, and the subsoil is extremely acid to strongly acid.

Construction for urban use is very difficult because of the very steep slopes. The hazard of erosion is high when vegetation is removed. Low strength and moderate depth to bedrock also limit many uses. Trails in recreational areas should be protected from erosion and established across the slope wherever possible.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: slope, low strength
Dwellings with basements	Severe: slope, low strength
Local roads and streets	Severe: slope, low strength
Septic tank absorption fields	Severe: slope, percs slowly, depth to rock
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	20 to 40 inches

Gr GRANBY SANDY LOAM

This deep, nearly level, very poorly drained soil is in basin-like depressions on the lake plain. Slope ranges from 0 to 2 percent. Most areas are irregular in shape and range from 5 to 100 acres in size.

Unless artificially drained, this soil has a seasonal high water table near the surface for long periods. Permeability is rapid. The rooting depth is related to the depth of the water table. The rooting zone is moderately deep or deep in most drained areas. Available water capacity is low. Runoff is very slow. Organic matter content is moderate. The surface layer and subsoil are medium acid or strongly acid except where the surface layer has been limed.

Prolonged wetness severely limits use of this soil for building sites and sanitary facilities. Sloughing is a hazard in excavation. Suitable base material and artificial drainage are commonly required for roads.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: wetness
Septic tank absorption fields	Severe: wetness
Flooding frequency	None
High water table	Apparent - Nov. thru June at depths of 0 - 1.0 feet
Bedrock depth	Greater than 60 inches

Kf KINGSVILLE FINE SAND

This deep, nearly level, very poorly drained, sandy soil is adjacent to beach ridges. Slope ranges from 0 to 2 percent. Most areas are long and narrow in shape and range from 5 to several hundred acres in size.

This soil receives seepage water from the beach ridges. It has a seasonal high water table near the surface in winter, spring, and other extended wet periods. Permeability is rapid, and runoff is very slow. Rooting depth is related to the depth of the water table. Available water subsoil is very strongly acid to slightly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

Wetness and rapid permeability severely limit the use of this soil for building sites and sanitary facilities. Sloughing is a hazard in excavations. Wetness also limits recreational use.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: wetness
Septic tank absorption fields	Severe: wetness
Flooding frequency	None
High water table	Apparent - Jan. thru April at depths of 0 - 1.0 feet
Bedrock depth	Greater than 60 inches

Lb LOBDELL SILT LOAM

This deep, nearly level, moderately well drained soil is on flood plains and is subject to flooding. Slope ranges from 0 to 2 percent. Most areas are long and narrow in shape and range from 5 to 30 acres in size.

A seasonal high water table is between depths of 1.5 and 3.0 feet in winter, spring, and other extended wet periods. Permeability is moderate or moderately rapid. Runoff is slow. Available water capacity is high in the deep rooting zone. Organic matter content is moderately low. The subsoil and substratum are strongly acid to neutral.

Flooding and seasonal wetness severely limit use of this soil for sanitary facilities and building sites. Some areas can be used for hiking and golfing. Diking to control flooding is difficult. This soil is a good source of topsoil.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: floods
Dwellings with basements	Severe: floods, wetness
Local roads and streets	Severe: floods, frost action
Septic tank absorption fields	Severe: floods, wetness
Flooding frequency	Common - brief - January thru April
High water table	Apparent - Dec. thru April at depths of 1.5 - 3 feet
Bedrock depth	Greater than 60 inches

LrB LORDSTOWN CHANNERY SILT LOAM

2-6% slopes

This moderately deep, gently sloping, well drained soil is on bedrock-controlled land-forms on uplands. Most areas are elongate in shape and range from 10 to 50 acres in size.

This soil warms and dries early in spring. Permeability is moderate. The rooting zone is mainly 20 to 30 inches deep over sandstone bedrock. Available water capacity and organic matter content are low. Runoff is medium. The surface layer and subsoil are strongly acid or very strongly acid except where the surface layer has been limed.

The hard bedrock at a depth of 20 to 30 inches limits the use of this soil for building sites and sanitary facilities. Blasting of bedrock is generally required for most of these uses. Because of droughtiness, lawns are difficult to establish. Many areas may be used for such recreational uses as picnic and camp areas despite the flat stone fragments.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Moderate: depth to rock
Dwellings with basements	Severe: depth to rock
Local roads and streets	Moderate: depth to rock, frost action
Septic tank absorption fields	Severe: depth to rock
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	20 to 30 inches

LrC LORDSTOWN CHANNERY SILT LOAM

6-12% slopes

This moderately deep, sloping, well drained soil is on the upper part of bedrock-controlled hillsides on the uplands. Slopes are mainly less than 300 feet long. Most areas are long and narrow and less than 10 acres in size.

This soil warms and dries early in spring and is droughty. Permeability is moderate. The rooting zone is mainly 20 to 30 inches deep over sandstone bedrock. Available water capacity and organic matter content are low. Runoff is rapid. The surface layer and subsoil are strongly acid or very strongly acid except where the surface layer has been limed.

Slope and bedrock at a depth of 20 to 30 inches limit the use of this soil for building sites and sanitary facilities. Blasting of bedrock is generally required for most of these uses. Bedrock also limits landscaping. Because of droughtiness, lawns are difficult to establish. Cover should be maintained on the site as much as possible during construction to reduce erosion.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Moderate: slope, depth to rock
Dwellings with basements	Severe: depth to rock
Local roads and streets	Moderate: slope, depth to rock, frost action
Septic tank absorption fields	Severe: depth to rock
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	20 to 30 inches

LxF LORDSTOWN ROCK OUTCROP COMPLEX

This complex consists of moderately deep, well drained, very steep Lordstown channery silt loam and areas of exposed bedrock on hillsides. The Lordstown soil is mainly on the lower parts of side slopes and the Rock outcrop is on the upper parts. Slopes are mainly short, rarely more than 200 or 300 feet long. Areas are mostly long and narrow in shape and range from 20 to 50 acres in size. The Lordstown soil makes up about 50 percent of this complex, and Rock outcrop makes up 30 percent. Other soils make up the remaining 20 percent. This soil and the Rock outcrop form such an intricate pattern that they were not separated in mapping.

The Lordstown soil warms and dries early in spring and is droughty. Permeability is moderate.. The rooting zone is mainly 20 to 30 inches of soil over sandstone bedrock. Available water capacity and organic matter content are low. Runoff is very rapid. The surface layer and subsoil are strongly acid or very strongly acid.

Construction for urban uses and recreation is difficult and the hazard of erosion is very severe when vegetation is removed. Trails in recreational areas should be protected from erosion and established across the slope wherever possible.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe : slope
Dwellings with basements	Severe: slope, depth to rock
Local roads and streets	Severe : slope
Septic tank absorption fields	Severe: slope, depth to rock
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	20 to 30 inches

MgA MAHONING SILT LOAM

0-2% slopes

This deep, nearly level, somewhat poorly drained soil is on upland flats. Areas are irregular in shape and commonly range from 5 to 20 acres in size.

A perched seasonally high water table is at a depth of 6 to 18 inches during winter, spring, and other extended wet periods. Permeability is slow or very slow. Runoff is slow. This soil warms and dries slowly in spring, even if it is artificially drained. Rooting depth is influenced by the upper 15 to 20 inches. It is moderately deep over glacial till. Available water capacity is moderate. Organic matter content is moderately low. The surface layer is very strongly acid t neutral, and the subsoil is very strongly acid to mildly alkaline.

Seasonal wetness, slow or very slow permeability, and low strength severely limit the use of this soil for building sites and sanitary facilities. This soil is better suited to houses without basements than to those with basements. Surface drains and storm sewers can be used to remove surface water. Sanitary facilities should be connected to commercial sewers wherever possible. Local roads can be improved by using artificial drainage and suitable base material. Wetness and slow or very slow permeability also limit the use of this soil for recreation.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness , low strength
Dwellings with basements	Severe: wetness, low strength
Local roads and streets	Severe: wetness, low strength
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Nov. thru June at depths of 0.5 - 1.5 feet
Bedrock depth	Greater than 60 inches

MgB MAHONING SILT LOAM

2-6% slopes

This deep, gently sloping, somewhat poorly drained soil is on uplands. Slopes are long and gentle. Areas range from 10 to 100 acres in size.

A perched seasonally high water table is at a depth of 6 to 18 inches during winter, spring, and other extended wet periods. Permeability is slow or very slow. Runoff is medium. This soil warms and dries slowly in spring, even if it is artificially drained. Rooting depth is influenced by the water table. In spring, the rooting zone is mainly the upper 15 to 20 inches of the soil. It is moderately deep over glacial till. Available water capacity is moderate. Organic matter content is moderately low. The surface layer is very strongly acid to neutral, and the subsoil is very strongly acid to mildly alkaline.

Seasonal wetness, slow or very slow permeability, and low strength severely limit the use of this soil for building sites and sanitary facilities. Excavations are limited by wetness during winter and spring. Buildings should be landscaped for good surface drainage away from the foundation. Houses without basements are better suited to this soil than those with basements. Sanitary facilities should be connected to commercial sewers wherever possible. Local roads can be improved by using artificial drainage and suitable base material. Cover should be maintained on the site as much as possible during construction to help to control erosion. Wetness and slow or very slow permeability also limit the use of this soil for recreation. Some areas of this soil are good pond sites.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness , low strength
Dwellings with basements	Severe: wetness, low strength
Local roads and streets	Severe: wetness, low strength
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Nov. thru June at depths of 0.5 - 1.5 feet
Bedrock depth	Greater than 60 inches

MhB MAHONING SILT LOAM

shale substratum

This deep, nearly level and gently sloping, somewhat poorly drained soil is in relatively flat areas between drainageways and in gently sloping areas near the heads of drainageways. Areas are variable in size but commonly range from 10 to 100 acres.

A perched seasonal high water table is at a depth of 6 to 18 inches during winter, spring, and other extended wet periods. Permeability is slow. Runoff is slow or medium. Depth to rippable bedrock ranges from 40 to 60 inches. This soil warms and dries slowly in spring, even if it is artificially drained. Rooting depth is influenced by the water table. In spring, the rooting zone is mainly the upper 15 to 20 inches of the soil. It is moderately deep over glacial till. Available water capacity is moderately low. The surface layer is very strongly acid to neutral, and the subsoil is very strongly acid to mildly alkaline.

Seasonal wetness, slow permeability, and bedrock at a depth of 40 to 60 inches severely limit the use of this soil for most building sites and sanitary facilities. Building sites should be landscaped to provide good surface drainage away from the foundation. Sanitary facilities should be connected to commercial sewers wherever possible. Local roads can be improved by using artificial drainage and suitable base material. This soil can support a good turf for lawns, but the turf is easily damaged when the soil is soft.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness , low strength
Dwellings with basements	Severe: wetness, low strength
Local roads and streets	Severe: wetness, low strength, wetness
Septic tank absorption fields	Severe: percs slowly, wetness, depth to rock
Flooding frequency	None
High water table	Perched - Nov. thru June at depths of 0.5 - 1.5 feet
Bedrock depth	40 to 60 inches

Mo MINOA FINE SANDY LOAM

This deep, nearly level, somewhat poorly drained soil is on the lake plain. Slope ranges from 0 to 2 percent. Areas of this soil are irregular in shape and range from 20 to 100 acres in size.

A seasonal high water table is at a depth of 6 to 18 inches during winter, spring, and other extended wet periods. In undrained areas the soil dries slowly in spring. Permeability is moderate, and runoff is slow. Rooting depth is influenced by the water table. Drained areas have a deep rooting zone. Available water capacity is high. The organic matter content is moderately low. The surface layer and subsoil are strongly acid to neutral.

The seasonal high water table severely limits the use of this soil for most sanitary facilities and for building sites. Ditches and subsurface drains are fairly effective in controlling the water table. Houses without basements are better suited to this soil than those with basements. Local roads can be improved by using artificial drainage and suitable base material.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, wetness
Septic tank absorption fields	Severe: wetness
Flooding frequency	None
High water table	Apparent - Feb. thru Apr at depths of 0.5 - 1.5 feet
Bedrock depth	Greater than 60 inches

Or ORRVILLE SILT LOAM

This deep, nearly level, somewhat poorly drained soil is on flood plains and is subject to flooding. Slope ranges from 0 to 2 percent. This soil occupies the entire flood plain in some narrow valleys and occurs as long, narrow strips on the flood plain in the larger valleys. Most areas range from 10 to 100 acres in size.

A seasonal high water table is near the surface for long periods in winter, spring, and early summer. Permeability is moderate, and runoff is very slow. Rooting depth is influenced by the water table. In drained areas the rooting zone is deep and available water capacity is moderate. Organic matter content is moderately low. The subsoil is strongly acid to slightly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

Flooding and seasonal wetness seriously limit the use of this soil for building sites and sanitary facilities.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: floods, wetness
Dwellings with basements	Severe: floods, wetness
Local roads and streets	Severe: floods, frost action, low strength
Septic tank absorption fields	Severe: floods, wetness
Flooding frequency	Common - very brief to brief - November thru May
High water table	Perched - Nov. thru June at depths of 0.5 - 1.5 feet
Bedrock depth	Greater than 60 inches

OsA OSHTEMO SANDY LOAM

0-2% slopes

This deep, nearly level, well drained soil is on outwash plains. Most areas are irregular in shape and range from 10 acres to 200 acres in size.

This soil dries and warms early in spring. Permeability is moderately rapid in the subsoil and very rapid in the substratum. Runoff is slow. Available water capacity is low in the deep rooting zone. This soil is droughty during periods of limited rainfall. Organic matter content is low. The subsoil is strongly acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

This soil is well suited to building sites but poorly suited to sanitary facilities because of the possible contamination of ground water from seepage. Sloughing is a hazard in excavations. Lawns that are seeded during the drier part of the growing season should be mulched and watered. This soil is a good source of sand and gravel.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Slight
Dwellings with basements	Slight
Local roads and streets	Slight
Septic tank absorption fields	Slight
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

OsB OSHTEMO SANDY LOAM

2-6% slopes

This deep, well drained, gently sloping soil is on outwash plains. A few areas are on the upper part of side slopes and crests of postglacial beach ridges. Slopes are commonly short and irregular. Areas range from 10 acres to 500 acres in size.

This soil dries and warms early in spring. Permeability is moderately rapid in the subsoil and very rapid in the substratum. Runoff is slow. Available water capacity is low in the deep rooting zone. This soil is droughty during periods of limited rainfall. Organic matter content is low. The subsoil is strongly acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

This soil is well suited to building sites but poorly suited to sanitary facilities because of the possible contamination of ground water from seepage. Sloughing is a hazard in excavation. Lawns that are seeded during the drier part of the growing season should be mulched and watered. This soil is a good source of sand and gravel.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Slight
Dwellings with basements	Slight
Local roads and streets	Slight
Septic tank absorption fields	Slight
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

OtB OTISVILLE GRAVELLY LOAMY SAND

This deep, nearly level and gently sloping, excessively drained soil is on the upper part of sides and crests of postglacial beach ridges. Most areas are long and narrow in shape and range from 20 to several hundred acres in size.

This soil dries and warms early in spring. Permeability is rapid, and runoff is slow. Available water capacity is low in the deep rooting zone. This soil is droughty. Organic matter content is low. The surface layer and subsoil are strongly acid or very strongly acid, except where the surface layer has been limed.

This soil is suitable for building sites. The possible contamination of ground water limits the use for sanitary facilities. Lawn seedings are difficult to establish during the drier part of the year. Lawns should be seeded early in spring; if seeded during dry periods, they should be mulched and watered. This soil is a good source of sand and gravel.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Slight
Dwellings with basements	Slight
Local roads and streets	Slight
Septic tank absorption fields	Slight
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

Pa PAINESVILLE FINE SANDY LOAM

This deep, nearly level, somewhat poorly drained soil is on sandy, low ridges and slight rises on the lake plain. Slope ranges from 0 to 2 percent. Most areas are several hundred acres in size, but a few are as small as 20 acres.

A seasonal high water table is between depth of 6 and 18 inches for long periods in winter, spring, and other extended wet periods. In undrained areas the soil dries slowly in spring. Permeability is slow or moderately slow. Runoff is slow. The rooting zone is mainly above the water table. In drained areas the rooting zone is deep and available water capacity is high. Organic matter content is moderately low. The subsoil is strongly acid to slightly acid.

The seasonal high water table severely limits the use of this soil for sanitary facilities and for building sites. Houses without basements are better suited to this soil than those with basements. Mechanical measures may be used to help to prevent wet basements. Local roads can be improved by using artificial drainage and suitable base material. Wetness also limits use of this soil for recreation.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, wetness
Septic tank absorption fields	Severe: wetness, percs slowly
Flooding frequency	None
High water table	Perched - Jan. thru April at depths of 0.5 - 1.5 feet
Bedrock depth	Greater than 60 inches

PeB PIERPONT SILT LOAM

2-6% slopes

This deep, gently sloping, moderately well drained soil is on till plains and moraines. It is on knolls and side slopes parallel to drainageways. Most areas are irregular in shape and range from 5 to 20 acres in size.

A perched seasonal high water table is on the slowly or very slowly permeable fragipan in winter, spring, and other extended wet periods. Runoff is medium. The rooting zone is mainly 18 to 30 inches deep over the fragipan. Available water capacity and organic matter content are low. The subsoil above the fragipan is strongly acid or very strongly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

The seasonal high water table and slowly or very slowly permeable fragipan limit the use of this soil for most sanitary facilities and for building sites. Buildings should be landscaped for surface drainage away from the foundation. This soil is better suited to houses without basements than to those with basements. Local roads can be improved by using artificial drainage and suitable base material. Good pond sites are available in many areas. This soil has good potential for such recreational uses as picnic areas and paths and trails.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Moderate: wetness, low strength
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: low strength, frost action
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Jan. thru April at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

PeB2 PIERPONT SILT LOAM

2-6% slopes, moderately eroded

This deep, gently sloping, moderately well drained soil is on till plains and moraines. Most areas are irregular in shape and range from 5 to 25 acres in size.

A perched seasonal high water table is on the slowly or very slowly permeable fragipan in winter, spring, and other extended wet periods. Runoff is medium. The rooting zone is mainly 18 to 30 inches deep over the fragipan. Available water capacity is low. The subsoil above the fragipan is strongly acid or very strongly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

The seasonal high water table and slowly or very slowly permeable fragipan limit the use of this soil for most sanitary facilities and for building sites. Buildings should be landscaped for surface drainage away from the foundation. This soil is better suited to houses without basements than to those with basements. Local roads can be improved by using artificial drainage and suitable base material. Good pond sites are available in many areas. This soil has good potential for such recreational uses as picnic areas and paths and trails.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Moderate: wetness, low strength
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: low strength, frost action
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Jan. thru April at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

PeC2 PIERPONT SILT LOAM

6-12% slopes, moderately eroded

This deep, sloping, moderately well drained soil is on hillsides and side slopes parallel to drainageways. Most areas are irregular in shape and range from 10 to 200 acres in size.

A perched seasonal high water table is on the slowly or very slowly permeable fragipan in winter, spring, and other extended wet periods. Runoff is rapid. The rooting zone is mainly 18 to 30 inches deep over the fragipan. Available water capacity is low in the rooting zone. Organic matter content is low in the surface layer. The subsoil above the fragipan is strongly acid or very strongly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

The slowly or very slowly permeable fragipan, slope and seasonal wetness limit the use of this soil for building sites and sanitary facilities. This soil is better suited to houses without basements than to those with basements. Cover should be maintained on the site as much as possible during construction to reduce the severe hazard of erosion. Local roads can be improved by using artificial drainage and suitable base material. Trails in recreational areas should be protected from erosion and established across the slope wherever possible.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Moderate: wetness, slope, low strength
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: low strength, frost action
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Jan. thru April at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

PeD2 PIERPONT SILT LOAM

12-18% slopes, moderately eroded

This deep, moderately steep, moderately well drained soil is on convex hillsides and side slopes parallel to drainageways. Most areas are irregular in shape and range from 5 to 20 acres in size.

A perched seasonal high water table is on the slowly or very slowly permeable fragipan in winter, spring, and other extended wet periods. Runoff is very rapid. The rooting zone is mainly 18 to 30 inches deep over the fragipan. Available water capacity is low in the rooting zone. The organic matter content is low. The subsoil above the fragipan is strongly acid or very strongly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

Slope, the slowly or very slowly permeable fragipan, and seasonal wetness limit the use of this soil for building sites and sanitary facilities. Erosion is a severe hazard during construction. Development of subdivisions and construction sites on the contour helps to reduce erosion. Cover should be maintained on the site as much as possible during construction to reduce the erosion hazard. Trails in recreational areas should be protected from erosion and established across the slope wherever possible.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: slope
Dwellings with basements	Severe: slope
Local roads and streets	Severe: slope, frost action, low strength
Septic tank absorption fields	Severe: slope, percs slowly, wetness
Flooding frequency	None
High water table	Perched - Jan. thru April at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

Po PITS, GRAVEL

Gravel pits consist of surface-mined areas from which aggregate material has been removed for construction. Gravel pits are on beach ridges and out-wash terraces. Typically, they are associated with Conotton, Otisville, Tyner, and other soils that are underlain by gravel and sand out-wash. Most pits range from 2 to 50 acres in size. Actively mined pits are continually enlarged.

Most pits characteristically have a high wall on one or more sides. The material that is mined consists of stratified layers of gravel and sand of varying thickness and orientation. The kind and grain size of aggregate are relatively uniform with any one layer but commonly differ from layer to layer. Some layers contain a significant amount of silt and sand.

Selectivity in mining is commonly feasible. The material that remains after mining is poorly suited to plants. The organic matter content and available water capacity are low. Most unused gravel pits can be developed as wildlife habitat or as recreation areas. They are commonly not used for farming or woodland.

PsA PLATEA SILT LOAM

0-2% slopes

This deep, nearly level, somewhat poorly drained soil is on broad flats on the uplands. The smaller areas, 5 to 10 acres in size, are oblong to oval in shape. The larger areas, 20 to 100 acres in size, are irregular in shape.

A perched seasonal high water table is above the very slowly permeable fragipan in winter, spring, and other extended wet periods. This soil dries slowly in spring. Runoff is slow. The rooting zone is mainly 24 to 28 inches deep over the fragipan. Available water capacity is low in the rooting zone. Organic matter content is moderately low. The subsoil above the fragipan is very strongly acid to medium acid, but the surface layer varies widely in reaction, depending on the amount of liming.

Seasonal wetness and very slow permeability severely limit the use of this soil for building sites and sanitary facilities. Houses without basements are better suited to this soil than those with basements. Building sites should be landscaped for surface drainage away from the foundation. Local roads can be improved by using artificial drainage and suitable base material. Wetness also limits use of this soil for recreation.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: low strength, wetness, frost action
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Jan. thru April at depths of 0.5 - 2.0 feet
Bedrock depth	Greater than 60 inches

PsB PLATEA SILT LOAM

2-6% slopes

This deep, nearly level, somewhat poorly drained soil is on slightly convex side slopes on the uplands. Most slopes are long with slight irregularities. Many areas are broad and commonly are more than 100 acres in size.

A perched seasonal high water table is above the very slowly permeable fragipan in winter, spring, and other extended wet periods. This soil dries slowly in spring. Runoff is medium. The rooting zone is mainly 24 to 28 inches deep over the fragipan. Available water capacity is low in the rooting zone. Organic matter content is moderately low. The subsoil above the fragipan is very strongly acid to medium acid, but the surface layer varies widely in reaction, depending on the amount of liming.

Seasonal wetness and the very slowly permeable fragipan severely limit the use of this soil for building sites and sanitary facilities. Houses without basements are better suited to this soil than those with basements. Local roads can be improved by using artificial drainage and suitable base material. Some areas are good pond sites.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: low strength, wetness, frost action
Septic tank absorption fields	Severe: percs slowly, wetness
Flooding frequency	None
High water table	Perched - Jan. thru April at depths of 0.5 - 2.0 feet
Bedrock depth	Greater than 60 inches

RhA RED HOOK SANDY LOAM

This deep, nearly level, somewhat poorly drained soil is on low beach ridges and offshore bars on the lake plain. Most areas are long and narrow in shape and range from 10 to 500 acres in size.

In undrained areas this soil has a seasonal high water table at a depth of 6 to 18 inches during winter, spring and other extended wet periods. Permeability is moderate or moderately slow. Runoff is slow. Rooting depth is influenced by the water table. In spring, the rooting zone is mainly the upper 15 to 20 inches. Available water capacity is moderate. Organic matter content is moderately low. The subsoil is medium acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

The seasonal high water table severely limits the use of this soil for most sanitary facilities and for building sites. Ditches to control the water table are effective to some extent if outlets are available. Houses without basements are better suited to this soil than those with basements. Excavation is limited during winter and spring by the high water table and caving of banks. Wetness also limits use of this soil for recreation.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: frost action, wetness
Septic tank absorption fields	Severe: wetness
Flooding frequency	None
High water table	Apparent - Dec. thru May at depths of 0.5 - 1.5 ft
Bedrock depth	Greater than 60 inches

Rv RIVERWASH

Riverwash consists of very cobbly and stony areas in the channels of major streams. Most of the rock fragments are shale and sandstone. Included in mapping are a few areas that contain some fine earth material.

Most areas are periodically flooded, depending on the characteristics of the stream. They typically are bare of vegetation, but willow, cattails, marsh grasses, and other water-tolerant plants grow in some areas. Riverwash is used for wildlife habitat.

St STAFFORD LOAMY FINE SAND

This deep, nearly level, somewhat poorly drained soil is on low sandy ridges on the lake plain. Slope ranges from 0 to 2 percent. Most areas of this soil are irregular in shape and range from 10 acres to several hundred acres in size.

A seasonal high water table is near the surface for long periods in winter, spring, and other extended wet periods. Permeability is moderately rapid or rapid. Runoff is slow. Rooting depth is related to the depth of the water table. Drained areas have a deep rooting zone. Available water capacity is very low. The organic matter content is moderately low. The surface layer and subsoil are strongly acid to neutral.

The seasonal high water table severely limits the use of this soil for building sites and sanitary facilities. Ditches that control the water table are effective to some extent. Houses without basements are better suited to this soil than those with basements. Excavation is limited during winter and spring by the high water table and caving of banks. Local roads can be improved by using artificial drainage. Wetness and the sandy surface layer limit the use of this soil for recreation.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Severe: wetness
Septic tank absorption fields	Severe: wetness
Flooding frequency	None
High water table	Apparent - Jan. thru May at depths of 0.5 - 1.5 feet
Bedrock depth	Greater than 60 inches

Sw SWANTON FINE SANDY LOAM

This deep, nearly level, poorly drained soil is in relatively broad, elongated strips on the lake plain. Slope ranges from 0 to 2 percent. Most areas range from 5 to 100 acres in size.

A seasonal high water table is near the surface for long periods. Permeability is moderately rapid in the subsoil and slow or very slow in the substratum. Runoff is very slow. Rooting depth is influenced by the water table and generally is restricted by the finer textured substratum. Available water capacity is moderate in the rooting zone. Organic matter content is moderate. The surface layer and subsoil are neutral to strongly acid.

The seasonally high water table severely limits the use of this soil for building sites, sanitary facilities, and recreation. The slow or very slow permeability in the substratum limits some uses. Local roads can be improved by using artificial drainage and suitable base material.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: wetness, shrink-swell
Dwellings with basements	Severe: wetness, shrink-swell
Local roads and streets	Severe: wetness, frost action , shrink-swell
Septic tank absorption fields	Severe: wetness, percs slowly
Flooding frequency	None
High water table	Apparent - Nov. thru May at depths of 0 - 1.0 feet
Bedrock depth	Greater than 60 inches

Tg TIOGA LOAM

This deep, nearly level, well drained soil is on flood plains and is subject to flooding. Slope ranges from 0 to 2 percent. Most areas are long and narrow in shape and range from 50 to 100 acres in size.

A seasonal high water table is in the substratum below a depth of 3 feet. It is controlled by the water level in adjacent streams in most areas. Permeability is moderate in the subsoil and moderately rapid or rapid in the substratum. Runoff is slow. Available water capacity is moderate in the deep rooting zone. Workability is good. Organic matter content is moderately low. The subsoil is strongly acid to neutral, but the surface layer varies widely in reaction, depending on the amount of liming.

Flooding seriously limits use of this soil for building site development and sanitary facilities. This soil has good potential for such recreational uses as picnicking, hiking and golfing. Diking to control flooding is difficult. This soil is a good source of topsoil.

CHARACTERISTIC/USES	LIMITATIONS
Dwellings without basements	Severe: floods
Dwellings with basements	Severe: floods
Local roads and streets	Severe: floods
Septic tank absorption fields	Severe: floods, wetness
Flooding frequency	Common - very brief to brief - January thru April
High water table	Apparent - Jan. thru April at depths of 3 - 6 feet
Bedrock depth	Greater than 60 inches

Th TIOGA VARIANT SILT LOAM

This deep, nearly level, well drained soil is on low stream terraces along the major rivers. It is on slightly higher positions than the adjacent first bottoms but is subject to rare flooding. Slope ranges from 0 to 2 percent. Most areas are long and narrow in shape and range from 10 to 50 acres in size.

A seasonal high water table is on the lower part of the subsoil or in the substratum below a depth of 3 feet during winter, spring, and other extended wet periods. Permeability is moderately rapid. Runoff is slow. Available water capacity is high in the deep rooting zone. Workability is good. Organic matter content is moderately low. The surface layer is very strongly acid to slightly acid, and the subsoil is strongly acid or very strongly acid.

The flooding hazard, seasonal high water table, and moderately rapid permeability limit the use of this soil for building sites and sanitary facilities. Most areas have good potential for such recreational uses as picnicking, golfing, and hiking. Flooding can be prevented by diking. Seepage from sanitary facilities in some areas may pollute ground water. This soil is a good source of topsoil.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Severe: floods
Dwellings with basements	Severe: floods
Local roads and streets	Moderate: frost action, floods, low strength
Septic tank absorption fields	Severe: wetness
Flooding frequency	Rare
High water table	Apparent - Jan. thru May at depths of 3.0 - 6.0 feet
Bedrock depth	Greater than 60 inches

TyB TYNER LOAMY SAND

1-6% slopes

This deep, nearly level and gently sloping, well drained soil is on the upper part of side slopes and crests of post-glacial beach ridges. Most areas are long and narrow in shape and range from 20 acres to several hundred acres in size.

This soil warms and dries early in spring. Permeability is rapid. Runoff is slow. Available water capacity is low in the deep rooting zone. This soil is droughty. Organic matter content is low. The subsoil is strongly acid to slightly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

This soil is suitable for building sites. The possible contamination of ground water limits the use of this soil for sanitary facilities. Lawn seedings are difficult to establish during the drier part of the year. Lawns should be seeded early in spring; if seeded during dry periods, they should be mulched and watered.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Slight
Dwellings with basements	Slight
Local roads and streets	Slight
Septic tank absorption fields	Slight
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

TyC TYNER LOAMY SAND

6-12% slopes

This deep, sloping, well drained soil is on sides of post-glacial ridges. Slopes are short. Most areas are long and narrow in shape and range from 5 to 10 acres in size.

This soil warms and dries early in spring. Permeability is rapid. Runoff is medium or rapid. This soil is droughty. Available water capacity is low in the deep rooting zone. Organic matter content is low. The subsoil is strongly acid to slightly acid, but the surface layer varies widely in reaction, depending on the amount of liming.

Although slope limits the use of this soil for building site, many areas are good building sites. The possible contamination of ground water limits the use of this soil for sanitary facilities. Lawn seedings are difficult to establish during the drier part of the growing season unless they are mulched and watered.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Moderate: slope
Dwellings with basements	Moderate: slope
Local roads and streets	Moderate: slope
Septic tank absorption fields	Moderate: slope
Flooding frequency	None
High water table	Greater than 6 feet
Bedrock depth	Greater than 60 inches

TzA TYNER VARIANT SANDY LOAM

This deep, nearly level, moderately well drained soil is on low ridges on the lake plain. Slope ranges from 0 to 2 percent. Most areas are irregular in shape and range from 5 to 50 acres in size.

A seasonal high water table is at a depth of 18 to 36 inches in winter, spring, and other extended wet periods. Permeability is rapid. Runoff is slow. This soil is droughty. Available water capacity is low in the deep rooting zone. The organic matter content is low. The subsoil is strongly acid or medium acid, but the surface layer varies widely in reaction, depending on the amount of liming.

Seasonal wetness and rapid permeability limit the use of this soil for building sites and sanitary facilities. It is better suited to houses without basements than to those with basements. Mechanical measures may be used to help to prevent wet basements. Because of seepage, contamination of ground water from sanitary facilities is possible. Sloughing is a hazard in excavations. If lawns are seeded during dry periods, they should be mulched and watered.

CHARACTERISTIC/USE	LIMITATIONS
Dwellings without basements	Moderate: wetness
Dwellings with basements	Severe: wetness
Local roads and streets	Moderate: frost action, wetness
Septic tank absorption fields	Severe: wetness
Flooding frequency	None
High water table	Apparent - Jan. thru May at depths of 1.5 - 3.0 feet
Bedrock depth	Greater than 60 inches

UdB UDORTHENTS

gently sloping

These soils are in cut and fill areas. Where the soil material has been removed, the remaining soil is typically similar to the material in the subsoil or substratum of adjacent soils. In fill or disposal areas, the soil material has more variable characteristics because it usually consists of varying amounts of materials from the subsoil and substratum of nearby soils. Slope ranges from 2 to 6 percent. Typically, these soils are silty clay loam, clay loam, or silt loam in the upper 60 inches.

Available water capacity varies, but is mostly low. Permeability is generally slow. The firm and dense surface layer is commonly littered with shale fragments. The soils have poor tilth. Hard rains tend to seal the surface, reducing infiltration and restricting seedling emergence and growth. A seasonal high water table is in some areas, particularly where grading has resulted in depressed or bowl-shaped areas. The rooting zone is medium acid to mildly alkaline.

Most areas of these soils are at new construction sites. About half of the areas lack any plant cover. A few areas are in hay or pasture. The hazard of erosion is severe in areas that are bare of vegetation. A suitable plant cover is needed to protect these soils from erosion the suitability of these soils for building sites and sanitary facilities is quite variable.

UdD UDORTHENTS

moderately steep

These soils are in cut and fill areas created by road construction. Where the soil material has been removed, the remaining soil is typically similar to the material in the subsoil or substratum of adjacent soils. In fill or disposal areas, the soil material has more variable characteristics because it usually consists of varying amounts of materials from the subsoil and substratum of nearby soils. Slope ranges from 12 to 18 percent. Typically, these soils are shaly silty clay loam, clay loam, or silt loam in the upper 60 inches.

Available water capacity varies, but is mostly low. Permeability is generally slow. The soils have poor tilth. Hard rains tend to seal the surface, reducing infiltration and restricting seedling emergence and growth. The rooting zone ranges from medium acid to mildly alkaline.

Most of the acreage of these soils is along highways and in borrow pits. About half of the areas lack any plant cover. They are poorly suited to grasses and legumes. The hazard of erosion is severe in areas that are bare of vegetation. A suitable plant cover is needed to reduce erosion.

Ur URBAN LAND

Urban land consists of areas 10 acres or more in size that are covered by buildings, pavements, or other man-made surfaces.

Included in Urban land are commercial and industrial areas, large factories, shopping centers, warehouses, and railroad yards. Slope ranges from 0 to 6 percent.

Much of the total area is covered by construction, leaving only a limited acreage of natural soil. This results in increased volume and rate of runoff from these areas. Urban land is a potential source of pollution to nearby streams.