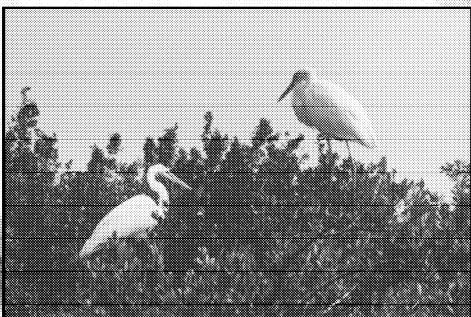


F SOIL MAP UNIT DESCRIPTIONS



SOIL MAP UNIT DESCRIPTIONS

The following soil map unit descriptions are derived from the U.S. Department of Agriculture Soil Survey of Dade County Area, Florida, Printed 1996.

Biscayne Gravelly Marl, Drained

The drained Biscayne gravelly marl is a very shallow, nearly level, poorly drained soil located on broad, low flats, in sloughs, and in transverse glades. Individual areas are irregularly shaped or rectangular and have slopes that are smooth or concave and are less than 2 percent. Typically, the surface layer is about 7 inches of dark gray gravelly marl that has a silt loam texture. Limestone fragments are 15 to 25 percent, by volume, but can range to as much as 35 percent. The fragments typically range from 2 millimeters to 7.5 centimeters in diameter. Hard, porous limestone occurs at about 7 inches.

Permeability is moderate. The water table remains within 10 inches of the surface for 2 to 4 months during most years, receding to as deep as 36 inches during dry periods.

At some time in the past, all areas have been drained, rock-plowed or mechanically scarified, and cultivated. The natural vegetation no longer remains, and abandoned fields rapidly become overgrown. If a water-control system is installed and properly maintained, this soil is well suited to a variety of shallow-rooted cultivated crops. It is also suited for pasture.

This soil is poorly suited to the production of ornamental trees and shrubs because of the depth to bedrock. It is also poorly suited for the production of citrus and mangos because of the wetness. It is unsuited to the production of avocados. It is not used as forest land. Because of the wetness and the depth to bedrock, this soil is severely limited as a site for buildings, sanitary facilities, and recreational development. Additional drainage measures and large amounts of fill are needed to overcome these circumstances.

Lauderhill Muck, Depressional

The Lauderhill muck depressional is a moderately deep, nearly level, and very poorly drained soil located on narrow drainageways and broad open areas in sawgrass marshes. Individual areas are long and narrow or broad and irregularly shaped, and slopes are smooth or concave and are less than 2 percent. Typically, the soil is muck to a depth of about 30 inches, the upper 7 inches is black, and the lower 23 inches is very dark brown. Hard, porous limestone bedrock is at a depth of about 30 inches.

Permeability is rapid. In most years, this soil type is ponded for 9 to 12 months. The water table is within 10 inches of the surface for the rest of the year.

Most areas support natural vegetation, which consists of cattail and sawgrass. Areas of this soil can provide cover for deer and excellent habitat for wading birds and other kinds of wetland wildlife.

This soil generally is not suited to cultivation under natural conditions. This soil is not suited to the production of citrus, avocados, or pine trees because of the wetness. Because of the ponding, excess humus, subsidence, low strength, and the depth to bedrock, this soil is severely limited as a site for buildings, sanitary facilities, and recreational development.

APPENDIX F

Pennsuco Marl, Drained

The drained Pennsuco marl is a deep, nearly level, poorly drained soil located on broad, low coastal flats and in transverse glades. Individual areas are broad and irregularly shaped and range from 10 to 350 acres in size. Slopes are smooth or concave and are less than 1 percent. Typically, the surface layer is about 8 inches of dark grayish brown marl that has a texture of silt loam. The underlying material extends to a depth of about 44 inches. It is grayish brown in the upper 19 inches and dark gray in the lower 17 inches. Very pale brown, soft accumulations of calcium carbonate are between depths of 8 and 44 inches and very dark gray pockets and vertical streaks are below a depth of about 27 inches. Soft, porous limestone is at a depth of about 44 inches.

Permeability is moderately slow. The water table in the Pennsuco soil remains within a depth of 10 inches for 2 to 4 months during most of the year and is at a depth of 10 to 40 inches for the rest of the year.

At some time in the past, all areas have been drained and cultivated. The native vegetation no longer remains and abandoned fields quickly become overgrown. A water-control system has been installed in most areas. If the water-control system is properly maintained, this soil is well suited to a variety of cultivated vegetable and grain crops and ornamental trees or shrubs. This soil is also suited to pasture.

This soil is poorly suited to the production of citrus and mangos because of the wetness and is unsuited for the production of avocados. This soil is generally not used as forest land but is suited to pasture. Because of the wetness and the depth to bedrock, this soil is severely limited as a site for buildings, sanitary facilities, and recreational development. Additional drainage and large amounts of fill generally are needed to overcome these limitations.

Pennsuco Marl

The Pennsuco marl is a deep, nearly level, very poorly drained soil located in broad, low coastal marshes and sloughs and in small depressional areas. Individual areas are broad and irregularly shaped. Slopes are smooth or concave and are generally less than 1 percent. Typically, the surface layer is about 4 inches of light brownish gray marl that has a texture of silt loam and has common black streaks in old root channels. From 4 to 46 inches, this soil is a light gray marl and has a few black streaks. Commonly, this soil has whole snail shells and shell fragments that are sand sized to 1 inch in diameter. Soft, porous limestone occurs at about 46 inches.

Permeability is moderately slow. The water table in the Pennsuco soil remains within a depth of 6 inches for 2 to 4 months during most of the year and is at a depth of 10 to 30 inches the rest of the year.

At some time in the past, all areas have been cleared, drained, and cultivated. The native vegetation no longer remains and abandoned fields quickly become overgrown. A water-control system has been installed in most areas. If the water-control system is properly maintained, this soil is well suited to a variety of cultivated vegetable and grain crops and ornamental trees and shrubs.

Generally this soil is not used as forest land or rangeland, and because of ponding, this soil is severely limited as a site for buildings, sanitary facilities, and recreational development.

Perrine Marl, Drained

The drained Perrine marl is a moderately deep, nearly level, poorly drained soil located on broad, low coastal flats and in transverse glades. Individual areas are broad and irregularly shaped. Slopes are smooth or concave and are generally less than 1 percent. Typically, the surface layer is about 10 inches of grayish brown marl that has a texture of silt loam. From 11 to approximately 26 inches, this soil is a light brownish gray marl, of silt loam texture, with few to many light gray, soft accumulations of calcium carbonate and few grayish brown stains in pockets or around pores and root channels. Soft, porous limestone bedrock occurs at about 26 inches.

Permeability is moderately slow. During most years the water table remains within 10 inches of the surface for 2 to 4 months and is at a depth of 10 to 30 inches for the rest of the year.

At some time in the past, all areas have been cleared, drained, and cultivated. The native vegetation no longer remains, and abandoned fields quickly become overgrown. A water-control system has been installed in most areas. If the water-control system is properly maintained, this soil is well suited to a variety of cultivated vegetable and grain crops and ornamentals. This soil is also suited to pasture.

The soil is poorly suited to the production of citrus and mangos because of the wetness and is unsuited to the production of avocados. This soil generally is not used as forest land but is suited to pasture. Because of the wetness and the depth to bedrock, the soil is severely limited as a site for buildings, sanitary facilities, and recreational development.

Krome Very Gravelly Loam

Krome very gravelly loam is a very shallow, nearly level, moderately well drained soil located on broad, very low hills on the Miami Ridge. Individual areas are broad and irregularly shaped. Slopes are smooth and generally range from 0 to 2 percent. The soil is generally dark brown, about 7 inches thick. It is underlain by hard, porous limestone at about 7 inches.

Permeability is moderate. The water table is within the limestone bedrock. It is at a depth of 40 to 60 inches in most years.

At some time in the past, all areas have been rock-plowed or mechanically scarified and cultivated, and natural vegetation no longer remains. This soil is suitable for pasture, citrus, and a wide variety of fruit and vegetable crops with special management.

This soil generally is not used as forest land. Due to the depth to bedrock and small stones, this soil is severely limited as a site for buildings, sanitary facilities, and recreational development. Local construction methods generally overcome these limitations, allowing this soil to be used for urban development.

Udorthents-Water Complex

The Udorthents-Water complex is a soil map unit that consists of Udorthents and open bodies of water. Udorthents' thickness range from very shallow to deep. They consist of unconsolidated or heterogeneous material removed during the excavation of ditches, canals, lakes, ponds, and quarries, with slopes from 15 to 60 percent. About 65 percent of this map unit is Udorthents, and about 20 percent is open water. Typically, the Udorthents consist of mixed light gray and white limestone gravel and loamy carbonate material, which can extend to depths of 80 inches or more.

APPENDIX F

Permeability is moderate. The water table in areas of the Udorthents is within the limestone bedrock.

Weeds and native grasses have become established in some areas, while other areas support little or no vegetation. This soil type is not used as cropland. In many areas it is used as a source of road-building material and as a source of fill for new homesites, golf courses, and other construction purposes.

Udorthents, Limestone Substratum-Urban Land Complex

Forty to 70 percent of this soil map unit consists of Udorthents in open areas. Twenty-five to 60 percent consists of Urban land, or areas covered by concrete and buildings. Slopes are generally 0 to 2 percent. The Udorthents typically consist of fill material that is light gray and white, extremely stony loam about 55 inches thick, underlain by limestone bedrock.

Udorthents are in areas of lawns, vacant lots, parks, and playgrounds. Urban land consists of streets, driveways, sidewalks, parking lots, buildings, and other structures in areas where the soil is covered and cannot be observed.

Permeability is moderate in the stony fill material. The water table in areas of the Udorthents is within the limestone bedrock.

The Udorthents areas are not used as cropland, but are used as fill material. The fill material improves the suitability of low areas for building site development or other urban uses. Lawns and ornamental plants established on the soils in this map unit, require a layer of good topsoil about 6 inches thick.

Udorthents, Marl Substratum-Urban Land Complex

Forty to 70 percent of this map unit consists of Udorthents in open areas. Twenty-five to 60 percent consists of Urban land, or areas covered by concrete and buildings. The Udorthents consist of heterogeneous material that has been excavated and spread. Slopes are generally 0 to 2 percent. Typically, the upper 12 inches of the Udorthents is a light gray, very gravelly loam. The next 29 inches is brown gravelly sandy loam. From 30 to more than 60 inches, this soil map unit is predominantly natural marl soil. Hard, porous limestone occurs at about 60 inches.

Udorthents are in areas of lawns, vacant lots, parks, and playgrounds. Urban land consists of streets, driveways, sidewalks, parking lots, buildings, and other structures in areas where the soil is covered and cannot be observed.

Permeability is moderate to moderately slow in the layers of marl. Depth to the water table in the Udorthents is frequently more than 40 inches, but varies, depending on the thickness of the fill.

The Udorthents are not used as cropland, but are used as fill material. The fill improves the suitability of low areas for building site development or other urban uses. Lawns and ornamental plants established on the soils in this map unit, require a layer of good topsoil about 6 inches thick.

Perrine Marl

Perrine marl is a moderately deep, nearly level, very poorly drained soil located in broad, low coastal marshes and sloughs and in small depressions. Individual areas are broad and irregularly shaped and slopes are smooth or concave and are generally less than 1 percent. Typically, the surface layer is about 4 inches of grayish brown marl with a silt loam texture, underlain to a depth of about 29 inches by a silt

loam marl that is mottled in shades of light brownish gray and light gray, having very dark grayish brown pockets and streaks. Soft, porous limestone is at a depth of about 29 inches.

Permeability is moderately slow. The water table in the Perrine soil remains at or above the surface for 2 to 6 months in most years and is within a depth of 12 inches for the rest of the year. Areas of this soil provide excellent habitat for wading birds, aquatic reptiles, small crustaceans, and other wetland wildlife.

Because of ponding, high pH, and boron toxicity, this soil is poorly suited to cultivated crops and the production of nursery plants. This soil is generally not used as forest land. Because of the ponding and the depth to bedrock this soil is severely limited as a site for buildings, sanitary facilities, and recreational development.

Biscayne Marl

Biscayne marl is a very shallow or shallow, nearly level, very poorly drained soil located on broad, low coastal flats, in freshwater marshes and sloughs, and in small depressional areas. Individual areas are broad and irregularly shaped and slopes are smooth or slightly concave, generally less than 2 percent. Typically, the surface layer is about 5 inches of gray marl silt loam. From 6 to a depth of about 17 inches, the soil is a gray or grayish brown marl silt loam.

Permeability is moderate. The water table in the Biscayne marl soil remains at or above the surface for 2 to 4 months during most years and recedes down to 20 inches during dry periods. Areas of this soil provide habitat for wading birds, aquatic reptiles, small crustaceans, and other wetland wildlife.

Because of ponding and salinity in some areas, this soil is poorly suited to cultivated crops such as citrus, mangos, and avocados, the production of nursery plants, and pasture. This soil is generally not used as forest land. Because of the ponding and the depth to bedrock, this soil is severely limited as a site for buildings, sanitary facilities, and recreational development.

Urban Land

The Urban land soil map unit is in areas where more than 85 percent of the surface is covered by shopping centers, parking lots, streets, sidewalks, airports, large buildings, houses, and other structures. The natural soil cannot be observed. The soils in open areas, mostly lawns, vacant lots, playgrounds, and parks, are mainly Udorthents, having been altered by grading or fill.

Biscayne Marl, Drained

The drained Biscayne marl is a very shallow or shallow, nearly level, poorly drained soil located on broad, low coastal flats and in transverse glades. Individual areas are broad and irregularly shaped or are rectangular. Slopes are smooth or concave and are generally less than 2 percent. Typically, the surface layer is about 5 inches of gray marl silt loam. At depths to 15 inches, the soil is a gray and light gray marl with a silt loam texture. Hard, porous limestone bedrock occurs at about 15 inches.

Permeability is moderate. In the Biscayne marl soil, the water table remains within 10 inches of the surface for 4 to 6 months during most years and receding down to 20 inches during dry periods.

At some time in the past, all areas have been drained and cultivated. The native vegetation no longer remains and abandoned fields quickly become overgrown. A water-control system has been installed in

APPENDIX F

most areas. If the water-control system is properly maintained, this soil is well suited to a variety of shallow-rooted cultivated crops. This soil is also suited to pasture.

Because of the wetness, the soil is poorly suited to the production of citrus and mangos, and is unsuited to the production of avocados. This soil is not used as rangeland or forest land.

This soil is severely limited as a site for buildings, sanitary facilities, and recreational development because of the wetness and the depth to bedrock.

Cardsound-Rock Outcrop Complex

This soil map unit consists of a Cardsound soil intermingled with areas of Rock outcrop. Individual areas are irregularly shaped or rectangular, and slopes are smooth and range from 0 to 2 percent. About 54 percent of this map unit is soils, and 38 percent is Rock outcrop. Typically, the surface layer of the Cardsound soil is a dark yellowish brown silty clay loam, generally about 4 inches thick underlain by hard, porous limestone.

Permeability is moderately slow. The water table in areas of the Cardsound soil is at a depth of 60 to 72 inches within the limestone bedrock.

This map unit is generally not used for fruit or vegetable crops.

Because of the depth to bedrock, this map unit is severely limited as a site for urban uses. However, with local construction methods, the limitations on use of this soil type for urban development can be overcome.

Opalocka-Rock Outcrop Complex

This soil map unit consists mainly of an Opalocka soil intermingled with areas of Rock outcrop. Individual areas are generally small in size, with smooth slopes that generally range from 0 to 2 percent. Typically, the surface layer of the Opalocka soil is brown sand, about 6 inches thick, with a hard, porous limestone bedrock underneath.

Permeability is very rapid in the soil. The water table in areas of the Opalocka soil is at a depth of 60 to 72 inches within the limestone bedrock.

Generally this map unit is not used for rangeland or fruit and vegetable crops. However, when cleared and rock-plowed, the map unit becomes Krome very gravelly loam, which commonly is used for crop production.

Because of the depth to bedrock, this map unit is severely limited for urban uses. However, with local construction methods, the limitations on the use of this soil type for urban development can be overcome.

Chekika Very Gravelly Loam

Chekika very gravelly loam is a very shallow, nearly level, somewhat poorly drained soil located in transitional areas between the Miami Ridge and the Everglades. Individual areas are broad and irregularly shaped. Slopes are smooth and generally range from 0 to 2 percent. Typically, the surface layer is dark grayish brown very gravelly loam, about 5 inches thick, with a hard, porous limestone bedrock underneath.

Permeability is moderate. In most years, the water table in areas of the Chekika soil is at a depth of 12 to 36 inches within the limestone bedrock.

At some time in the past, all areas have been rock-plowed and used for vegetable crops. This soil is suitable for pasture and fruit and vegetable crops, but special management is needed.

This soil is not used as forest land but is suited to pasture. Because of the depth to bedrock and the wetness, this soil is severely limited as a site for urban uses. Water-control measures and mounding may be needed on sites for septic tank absorption fields and buildings.

Matecumbe Muck

Matecumbe muck is a very shallow, moderately well drained soil located on small tropical hardwood hammocks on the Miami Ridge and in the Everglades. It is occasionally flooded. Slopes are smooth or slightly convex and are generally less than 2 percent. Typically, the surface layer is a thin bed of leaf litter, twigs, and branches in varying stages of decomposition. Soft limestone bedrock is at a depth of about 3 inches, with sinkholes of varying size.

Permeability is rapid. In most years, the water table in areas of the Matecumbe soil is at a depth of 18 to 36 inches within the limestone bedrock.

Generally this soil is not suited to pasture, vegetable crops, or the production of fruit or citrus because of the depth to bedrock. This soil is generally not used as rangeland. It is well suited to wildlife habitat. Because of the depth to bedrock, this soil is severely limited as a site for urban uses.

Biscayne-Rock Outcrop Complex

This soil map unit consists of Biscayne marl intermingled with areas of Rock outcrop. Individual areas are broad and irregularly shaped and slopes are smooth and generally less than 2 percent. Typically, the surface layer of the Biscayne soil is about 4 inches of grayish brown marl that has a texture of silt loam. It is underlain by a hard, porous limestone bedrock.

Permeability is moderate. The soil can be briefly ponded during extremely wet periods, but for the majority of most years, the water table is below the surface.

Most areas support natural vegetation, but this map unit is not used for fruit or vegetable crops, ornamental plants, forest land, or pasture.

Because of the wetness and the depth to bedrock, this map unit is severely limited as a site for urban uses and recreational development.

Perrine Marl, Tidal

The tidal Perrine marl is a moderately deep, nearly level, very poorly drained soil located in tidal mangrove swamps near the coast. Slopes are smooth or concave and are generally less than 1 percent. Typically, the surface layer is about 12 inches thick and consists of dark brown marl that has a texture of silt loam. From 12 to 26 inches, it is dark gray marl silt loam underlain by soft, porous limestone.

Permeability is moderately slow and, under natural conditions, this Perrine marl soil remains saturated as the water table fluctuates with the tides. Areas of this soil can provide excellent habitat for birds and small marine crustaceans.

APPENDIX F

This soil is not suited to cropland, groves, or improved pasture because of tidal flooding and salinity. Because of the tidal flooding, the depth to bedrock, and the wetness, this soil is severely limited as a site for all urban uses.

Pennsuco Marl, Tidal

The tidal Pennsuco marl is a deep, nearly level, very poorly drained soil in tidal mangrove swamps near the coast. Slopes are smooth or concave and generally less than 1 percent. Typically, the surface layer is about 51 inches of light gray marl with a silt loam texture that is underlain by soft, porous limestone bedrock.

Permeability is moderately slow and, under natural conditions, this Pennsuco marl soil remains saturated. The water table fluctuates with the tides. Areas of this soil can provide excellent habitat for birds and small marine crustaceans.

This soil is not suited to cropland, groves, or improved pasture because of tidal flooding and salinity. Because of tidal flooding and ponding, this soil is severely limited as a site for all urban uses.

Terra Ceia Muck, Tidal

The tidal Terra Ceia muck is a deep, level, very poorly drained soil located in saltwater swamps and marshes that are subject to tidal flooding. Individual areas are long and narrow, and slopes are generally less than 1 percent.

Typically, this soil is muck to a depth of 80 inches or more. The upper 8 inches is very dark brown, and the lower 72 inches or more is black.

Permeability is rapid, and, under natural conditions, the Terra Ceia soil remains saturated as fluctuating tides cover the surface twice daily.

This soil is not suited to cropland, citrus, or improved pasture because of tidal flooding. Because of the tidal flooding and low strength, this soil is not suited to urban uses.

Udorthents, Limestone Substratum, 0 To 5 Percent Slopes

The limestone substratum, 0 to 5 percent slope, Udorthents are nearly level or gently sloping, moderately well drained or well drained soils, commonly 30 inches thick, consisting of thin or thick deposits of fill material that have been excavated from nearby areas and spread over the surface. Typically, the surface layer is a dark gray gravelly sand about 4 inches thick. Below this, to a depth of about 30 inches, are light gray, unconsolidated limestone fragments. Hard, porous limestone bedrock occurs underneath.

Permeability generally is rapid. Depending on the amount of fill material and the drainage measures in a given area, the depth to the water table varies. In most areas the water table is below a depth of 40 inches.