SOIL TYPE DESCRIPTIONS
Northeast District

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Adamsville fine sand 0 to 2 percent slopes - This soil is nearly level and somewhat poorly drained. It is on low ridges in the coastal swamps and on the flatwoods and is at the base of the lower slopes on the uplands. With slopes of 2 percent or less, this soil is in a transitional position in the drainage pattern. It gradually releases water to more poorly drained soil in natural drainageways, swamps, ponds, and marshes.

Typically, the surface layer is dark grayish brown fine sand about 7 inches thick. The underlying material to a depth of 80 inches is light yellowish brown and very pale brown fine sand.

Included with this soil (less than 20 percent of the map unit) are areas of Basinger, Myakka, Pompano, and Tavares soils. Also included are small areas of soils that are similar to Adamsville soil and have limestone boulders or bedrock in the profile.

The water table is between depths of 20 and 40 inches for 2 to 6 months. It may rise to a depth of less than 20 inches for 2 weeks during very wet weather. During dry seasons, the water table generally recedes to a depth of more than 40 inches. Internal drainage is slow. Permeability is rapid. The available water capacity is very low. Natural fertility is low.

Adamsville fine sand, 0 to 5 percent slopes - This soil is nearly level and somewhat poorly drained. It is on low ridges in the coastal swamps and on the flatwoods and is at the base of the lower slopes on the uplands. This soil is in a transitional position in the drainage pattern. It gradually releases water to more poorly drained soil in natural drainage paths, swamps, ponds, and marshes. The mapped areas are irregular in shape or somewhat circular and range from about five to 150 acres. The slopes are two percent or less.

Typically, the surface layer is dark grayish brown fine sand about seven inches thick. The underlying material to a depth of 80 inches is light yellowish brown and very pale brown fine sand.

Included with this soil in mapping are areas of Basinger, Myakka, Pompano, and Tavares soils. Also included are small areas of soils that are similar to Adamsville soil and have limestone boulders or bedrock in the profile. The included soils make up less than 20 percent of the map unit.

The water table is between depths of 20 and 40 inches for two to six months. It may rise to a depth of less than 20 inches for two weeks during very wet weather. During dry seasons, the water table generally recedes to a depth of more than 40 inches. Internal drainage is slow. Permeability is rapid. The available water capacity is very low. Reaction ranges from very strongly acid to mildly alkaline. Natural fertility is low.

Adamsville sand, 0 to 5 percent slopes - This is a nearly level to gently sloping, somewhat poorly drained soil that occurs as small and large areas in the flatwoods and along the lower slopes of the sandy uplands. The water table rises to within 10 to 20 inches of the surface for less than 2 weeks during wet periods, but remains at 20 to 40 inches for cumulative periods of 2 to 6 months during most years. It recedes to a depth of more than 40 inches during dry periods.

Included with this soil in mapping are a few areas of a similar soil that is fine sand, is extremely acid or has a slope of 5 to 8 percent. Also included are small areas of Candler, Pomana, Pompano, and Tavares soils. Included soils make up about 15 percent of any one mapped area.

Albany fine sand, 0 to 5 percent slopes - This soil is nearly level, gently sloping, and somewhat poorly drained. It is on the lower parts of broad, low ridges and on slight knolls in the flatwoods. Slopes are nearly smooth or convex.

Typically, the surface layer is very dark gray fine sand about 7 inches thick. The subsurface layer is fine sand that extends to a depth of about 41 inches. The upper 17 inches is pale brown, and the lower 17 inches is very pale brown. The subsoil, to a depth of 80 inches or more, is fine sandy loam. It is light gray in the upper part and, in the lower part, mottled yellowish-brown, pale brown, and light gray.

Permeability is moderate in the Albany soil, and the available water capacity is low. The water table is at a depth of 12 to 30 inches for 1 to 6 months during most years.

Albany fine sand, 0 to 5 percent slopes, occasionally flooded – This is a somewhat poorly drained, nearly level to gently sloping soil on broad flats and low-lying, undulating terrain in flood-prone areas. This soil is flooded occasionally for long periods after intense, heavy rainfall. Typically, the surface layer is grayish-brown fine sand about 7 inches thick. The subsurface layer is fine sand and extends to a depth of 55 inches. In the upper 8 inches, it is pale brown; in the next 15 inches, it is pale brown with yellow and white mottles; and in the lower 25 inches, it is white with brownish yellow mottles. The subsoil is gray sandy clay loam with yellowish brown mottles, and it extends to a depth of 80 inches or more.

Albany-Ridgewood complex, 0 to 3 percent slopes - The Albany series consists of somewhat poorly drained soils of the coastal plain. In a typical profile, the surface layer is dark gray sand 7 inches thick with a subsurface layer 41 inches thick. The subsurface layer is light yellowish brown sand in the upper part and brownish yellow loamy sand in the lower part; both mottled with shades of yellow, gray and brown. The subsoil to a depth of 88 inches is sandy loam and sandy clay loam. It is light yellowish brown in the upper part mottled with shades of brown, gray and yellow. The lower art is mottled with shades of yellow and red. Slopes are 0 to 6 percent. The Ridgewood series consists of somewhat poorly drained soil on the broad Flatwoods and along transitional areas of the uplands. Typically, the surface layer is dark gray fine sand about 5 inches thick. The underlying layers are fine sand to depths of more than 80 inches. The upper 8 inches is pale brown, the next 11 inches is very pale brown with brownish yellow mottles. The next 32 inches is light gray with mottles, and the lower 24 inches is light gray. Slope ranges from 0-8 percent.

Allanton and Rutledge Mucky Fine Sand, depressional - The soils in this map unit are nearly level and very poorly drained. These soils are in depressional areas. The mapped areas are circular, elongated, or irregular in shape and range from 10 to 70 acres. The slopes are concave and range from about 0 to 2 percent.

Allanton soil makes up about 40 to 55 percent of this map unit. Rutlege soil makes up about 35 to 40 percent. The included soils make up less than 20 percent of the map unit.

Typically, the upper part of the surface layer of this Allanton soil, to a depth of about 12 inches, is very dark gray mucky fine sand. The lower part, to a depth of 18 inches, is very dark grayish brown mucky fine sand. The upper part of the subsurface layer, to a depth of about 26 inches, is dark gray fine sand. The lower part, to a depth of 56 inches is grayish brown fine sand. The upper part of the subsoil, to a depth of 80 inches is very dark gray fine sand with organic coatings on the sand grains.

Typically, the upper part of the surface layer of this Rutlege soil, to a depth of about 12 inches, is black mucky fine sand. The lower part, to a depth of about 23 inches, is very dark grayish brown mucky fine sand. The underlying material is fine sand. The upper part, to a depth of 41 inches, is grayish brown. The next layer, to a depth of 48 inches, is light gray. The lower part to a depth of 80 inches is light brownish gray.

Included in mapping are some small areas of Leon, Plummer, Sapelo, and Surrency soils.

The soils in this map unit have a high water table within 12 inches of the surface for 6 to 12 months of the year. The surface generally is covered with water for 6 months or more. The available water capacity is moderate. The permeability is moderately rapid; however, because of a shallow water table the internal drainage is slow.

Alpin fine sand, 0 to 5 percent slopes - This soil, on uplands, is nearly level, gently sloping, and excessively drained. Slopes are nearly smooth or convex.

Typically, the surface layer is dark gray fine sand about 6 inches thick. The underlying material, to a depth of about 80 inches, is fine sand. The upper 12 inches is light yellowish-brown, while the next 33 inches is very pale brown. The lower 29 inches also is very pale brown, with thin layers of yellowish-brown loamy fine sand.

In the Alpin soil, permeability is rapid, available water capacity is low, and runoff is very slow. The water table is below a depth of 6 feet.

Alpin fine sand, 0 to 5 percent slopes, occasionally flooded - This unit consists of 91 percent Alpin fine sand. Typically, the profile contains fine sand to 80 inches. The parent materials are sandy marine deposits. The soil is occasionally flooded. The available water capacity is very low. The depth to the water table is more than 6 feet. Blanton and Foxworth soils make up the remaining 19 percent of this unit.

Alpin fine sand, 5 to 12 percent slopes - This is an excessively drained, sloping to strongly sloping soil on side slopes of broad, slightly elevated ridges. The major soil component contains 85 percent Alpin fine sand. The typical soil profile has fine sand to a depth of 80 inches or more. The parent material contains Eolian deposits or sandy marine deposits. The available water capacity is low (about 3.7 inches). This Alpin soil does not have a water table within a depth of 80 inches at any time. The minor soil components, Blanton, Lakeland, Troup, Chipley, and Albany, make up 15 percent of this unit.

Alpin fine sand, occasionally flooded – This soil is nearly level to gently sloping and is in excessively drained uplands adjacent to floodplains. Typically, the surface layer is dark brown fine sand about 4 inches thick. The subsurface layer has two parts. The upper part is light yellowish brown fine sand and below this to 55 inches is very pale brown fine sand. The subsoil below this, to 80 inches, is white fine sand that has horizontal bands of yellowish-brown sand. Included in this mapping unit are small areas of Eunola and Troup soils that have loamy subsoils from 20 to 40 inches. The seasonal high water table is below 72 inches of the surface. Permeability is rapid, and available water capacity is low.

Anclote sand - This is a very poorly drained soil that occurs as small areas on low flats, in depressions, and along poorly defined drainageways in the flatwoods. It has the profile described as representative of the series. Slopes are 0 to 2 percent. The water table is within a depth of 10 inches for more than 6 months, and in depressions the surface is covered with about 4 to 20 inches of water for 6 months or more during most years. Areas along the Oklawaha River are subject to flooding.

Included with this soil in mapping are small areas of Holopaw, Okeechobee, Placid, Bluff, and Tomoka soils; small areas where the surface layer is 8 to 16 inches thick and is more than 20 percent organic matter; and a few small areas of a similar soil that has a sandy clay loam subsoil at a depth of 50 to 80 inches. Included soils make up about 20 percent of any one mapped area.

Anclote fine sand - This is a very poorly drained soil in depressional areas. Slopes are usually concave and less than 2 percent. Typically, the surface layer is black fine sand about 7 inches thick. The subsurface layer is very dark gray fine sand about 7 inches thick. Below that is fine sand. The upper 6 inches of it is grayish brown, the next 10 inches is light to brownish gray, and the next layer is gray to a depth of 80 inches or more. Included with this soil in mapping are small areas of Basinger soils, depressional, and Delray, Floridana, and Pompano soils. Also included are similar soils that have a thin surface layer of muck. Included soils make up about 15 percent of any mapped area. In most years, under natural conditions, the water table is above the surface for 3 to 6 months during wet seasons and recedes to a depth of more than 20 inches during dry seasons. This soil has medium available water capacity to a depth of about 14 inches and low available water capacity below this depth. Permeability is rapid throughout. Internal drainage, however, is slow because it is impeded by a

shallow water table. Natural fertility and organic matter content are high to a depth of about 14 inches and low below this depth.

Apopka sand, 0 to 5 percent slopes - This is a near level to gently sloping, well-drained soil that generally occurs as small areas in the uplands. It has the profile described as representative of the series. The water table is at a depth of more than 72 inches.

In representative profile the surface layer is dark gray sand about 6 inches thick. The subsurface layer is about 49 inches of sand, many grains of which are uncoated. The upper 22 inches is light yellowish brown, and the lower 27 inches is yellow. The subsoil is about 26 inches thick. The upper 5 inches is yellowish red sandy clay loam having a few lenses of sandy loam, the next 9 inches is yellowish red sandy clay loam, mottled yellowish red and red light sandy clay loam. The underlying material to a depth of 88 inches is mottled strong brown, yellowish red, yellowish brown, and white, partly weathered sandy loam and sandy clay loam.

Included with this soil in mapping are small areas of similar soils, where the sandy surface and subsurface layer combined are less than 40 inches thick, the slope is 5 to 8 percent, or the surface layer is fine sand and small areas of Candler, Jumper, and Tavares soils. Also included, in the western part of thecounty, are a few areas where 35 to 60 inches of strongly acid to slightly acid fine sand overlies a slightly acid to neutral subsoil and calcareous limestone. Included soils make up about 15 percent of any one mapped area.

Apopka sand, 5 to 8 percent slopes - This is a somewhat poorly drained, nearly level to gently sloping soil on broad flats and low-lying, undulating terrain in flood-prone areas. This soil is flooded occasionally for long periods after intense, heavy rainfall, and it has been flooded in March or April about once every 10 years. The areas of this soil range from 10 to 40 acres. The slope ranges from 0 to 5 percent.

Typically, the surface layer is grayish brown fine sand about 7 inches thick. The subsurface layer is fine sand and extends to a depth of 55 inches. In the upper 8 inches, it is pale brown; in the next 15 inches, it is pale brown with yellow and white mottles; and in the lower 25 inches, it is white with brownish yellow mottles. The subsoil is gray sandy clay loam with yellowish brown mottles, and it extends to a depth of 80 inches or more.

Included with this soil in mapping are small areas of occasionally flooded Blanton and Plummer soils. Also included are small areas of soils that are similar to the Albany soil but have stratified layers of sand or are underlain by clay. These soils make up about 20 percent of the map unit.

This Albany soil has a water table at a depth of 12 to 30 inches for 1 to 4 months in most years. The water table is at a depth of 30 to 50 inches most of the time and is below 50 inches in the driest months. The available water capacity is very low in the surface and subsurface layers, low in the upper part of the subsoil, and medium in the lower part of the subsoil. Permeability is rapid in the layers of sand and moderate in the subsoil. Natural fertility and the organic matter content are low.

Aqualfs, loamy - This consists of gently sloping excavation with short steep side slopes from which soil and geologic material have been removed for use in road construction, foundations, septic tank absorption fields, etc. Most areas of this map unit are abandoned, but excavation is continuing in a few place. Those areas that have been excavated below the normal water table usually contain water and where large enough are mapped as water. Loamy aqualfs do not have an orderly sequence of soil layers. They are variable, but usually contain the subsoil and substratum of associated soils.

Arents, 0 to 5 percent slopes – These are nearly level to gently sloping soils that have been reworked in earthmoving operations and are used dominantly as trench-type sanitary landfills. The individual areas of these soils range from 1 to 160 acres.

The upper 2 to 3 feet of these soils is a mixture of sandy materials interbedded with fragments or pieces of loamy subsoil material or weakly cemented sandy subsoil material, or both. This material is underlain by 2 to 20 feet of garbage and refuse. In some areas, the mixture of sandy materials is used as a daily cover for stratified layers of garbage.

Some areas of this map unit are former pits. In other areas, material has been dumped on the surface of undisturbed soils. Included in mapping are areas that do not have fragments of pieces of subsoil material and ponds or depressions that have been filled with various materials other than garbage and refuse.

Arents soils have a variable water table that is dependent upon the water table of the surrounding soils. Permeability is variable but generally ranges from very rapid to moderately rapid. Natural fertility is low. The content of organic matter and the available water capacity are variable.

Arents, 45 to 65 percent slopes – This soil, which consists of soil material and limestone dug from canals, is piled along the side of the canals or used to form embankments for highway overpasses. Most of this map unit is along the excavations that were dug as part of the Cross Florida Barge Canal.

This soil is comprised of sandy mineral material mixed with varying amounts of loamy and finer textured material from the former subsoil and substratum and with limestone fragments ranging from sand-size to large boulders. In some locations, parts of former organic soil horizons are also intermixed. This soil does not have an orderly sequence of soil layers but is a highly variable mixture of lenses, streaks, and pockets of soil material and limestone fragments. The thickness of the Arents ranges from about 2 feet to 30 feet or more.

Included with this soil are other areas of Arents that have slopes ranging from 12 to 45 percent. Also included are small areas of natural soils and Arents that have slopes of 5 percent or less.

The water table is more than 6 feet below the surface throughout the year. Permeability is variable, but it is rapid in most areas. Rain runs off rapidly with minimal absorption except where the surface is protected by vegetation. The available water capacity varies, but is mostly low to very low.

Arents, nearly level - These are nearly level, poorly drained sandy and loamy soils that have shell fragments, rocks, or muck. This soil type is in areas from 20 to 120 acres.

Typically, the soils consist of mixed soil material. This material is light gray, grayish brown, very pale brown, yellow, black, dark reddish brown, strong brown and red fine sand, sandy loam, and sandy clay loam. Sandy textures are dominant in most areas. The sandy loam and sandy clay loam part are fragments or pieces of subsoil material. Pieces of weakly cemented subsoil material are also present in most of these soils. Thickness of the material ranges from 2 to 20 feet. This soil does not have an orderly sequence of horizons.

Under natural conditions, these soils have a water table at a depth of 10 to 30 inches for 2 to 6 months during most years. Permeability is variable. Natural fertility is low, and organic matter content is variable. Available water capacity is variable.

Arredondo fine sand, 0 to 5 percent slopes – This is a nearly level to gently sloping, well drained soil that occurs in the uplands. Slopes are smooth and convex in shape. This soil may contain small depressions, limestone boulders, fragments of limestone, and sinkholes. Most of these boulders are siliceous. The water table in this soil is at a depth of more than 72 inches. Surface runoff is slow due to rapid infiltration. Permeability is rapid in the surface and subsurface layers and moderately slow to moderate in the loamy subsoil.

The surface layer is dark grayish fine sand about 8 inches thick. The subsurface layer is yellowish brown fine sand to a depth of 49 inches. The subsoil extends to a depth of 86 inches or more and consists of yellowish brown sandy clay loam. Organic matter content is low.

Arredondo fine sand, 5 to 8 percent slopes - This sloping, well drained soil is in small areas on sharp breaking slopes and in large areas on long slopes of uplands. Slopes are smooth to convex.

Typically, the surface layer is dark grayish brown fine sand about 5 inches thick. The subsurface layer is yellowish brown fine sand to a depth of 65 inches. The subsoil extends down to 88 inches and is yellowish brown sandy loam in the upper 6 inches and yellowish brown sandy clay loam below that.

In the sandy surface and subsurface layers of this soil, the available water capacity is low and permeability is rapid. In the loamy subsoil, the available water capacity is medium, and permeability is moderately slow. Surface runoff is slow. The water table is at a depth of more than 72 inches. Organic matter content is low. Natural fertility is low in the sandy surface and subsurface layers and medium in the finer textured subsoil.

Arredondo sand, 0 to 5 percent slopes - This is a near level to gently sloping, well-drained soil that occurs as both small and large areas in the upland. This soil occurs as broad rolling areas of the upland. It has the profile described as representative of the series. The water table is at a depth of more than 72 inches.

In a representative profile the surface layer is dark grayish brown sand about 7 inches thick. The subsurface layer is mixed yellowish brown and dark yellowish brown sand about 11 inches thick. The subsoil extends to a depth of 90 inches or more. In sequence downward, it is 28 inches of yellowish brown sand mottled with strong brown, 19 inches of strong brown sand having a few white mottles, 5 inches of strong brown loamy sand, and 20 inches of strong brown fine sandy loam.

Included with this soil in mapping are small areas of Candler, Kendrick, Hague, Gainesville, and Sparr soils; a few small areas where the surface layer is fine sand, loamy sand, and loamy fine sand; a few areas of a similar soil, where the slope is 5 to 8 percent; and, in the south-central part of the county, spots where 35 to 65 inches of strongly acid to medium acid fine sand overlies limestone. Also included are rock outcrop sinkholes, and a few small depressions where a very dark gray or black surface layer 8 to 24 inches thick overlies ray sand. Included soils make up about 20 percent of any one mapped area.

Arredondo sand, 5 to 8 percent slopes - This is a sloping, well-drained soil that occurs as small areas on sharp-breaking slopes and on long slopes of the upland. In places a few rills have formed as a result of erosion. The water table is at a depth of more than 72 inches.

Included with this soil in mapping are small areas of Candler, Kendrick, and Hague soils; a few small depressions where a black surface layer 8 to 24 inches thick overlies yellowish brown to grayish brown sandy material; and a few areas of a similar soil, where the slope is 0 to 5 or 8 to 12 percent. Also included are a few small areas where the surface layer is fine sand, loamy sand, and loamy fine sand. Rock outcrops and sinkholes occur in places. Included soils make up about 15 percent of any one mapped area.

Astatula sand, 0 to 5 percent slopes – This is nearly level to gently sloping, excessively drained soil that occurs as small and large areas in the upland. It has the profile described as representative of the series. To a depth of 40 inches or more, many of the sand grains are uncoated. The water table is at a depth of more than 72 inches.

Included with this soil in mapping are a few areas of a similar soil, where the texture is fine sand; a few small areas where the slope is 5 to 12 percent; and small areas of a similar excessively drained soil that is sandy clay loam below a depth of 40 to 80 inches. Also included are a few small areas of Candler, Electra, Pompano, Adamsville, and Tavares soils. Included soils make up about 12 percent of any one mapped area.

Astatula fine sand, 5 to 8 percent slopes - This soil is moderately sloping and excessively drained. It is on uneven side slopes and upland ridges. The mapped areas are irregular in shape and range from 5 to about 100 acres.

Typically, the surface layer is gray fine sand 2 inches thick. The underlying material to a depth of 80 inches is brownish yellow and yellow fine sand.

Included with this soil in mapping are small areas of Candler, Lake, Paola, and Tavares soils. Also included are small areas of Astatula soils that have slopes of more than 8 percent. The included soils make up about 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Permeability is very rapid. The available water capacity is very low. The soil rapidly becomes droughty during periods of low rainfall. If the surface is protected by a vegetative cover, rain is rapidly absorbed into the soil, and runoff is slow. Unprotected areas have increased erosion hazard. Natural fertility is very low. Reaction ranges from very strongly acid to slightly acid.

Basinger fine sand – Nearly level and poorly drained, this soil is in poorly defined drainageways and sloughs throughout the county. The mapped areas are irregular in shape, following the local drainage patterns. The slopes are less than 2 percent.
Typically, the surface layer is black fine sand 3 inches thick. The subsurface layer, to a depth of 8 inches, is light gray fine sand. The next layer, to a depth of 24 inches, is a mixture of light brownish gray subsurface material and dark reddish brown and dark brown subsoil material. The substratum to a depth of 80 inches or more is light gray and white fine sand.

Included with this soil are small areas of EauGallie, Immokalee, Myakka, and Pompano soils. Also included are small areas of soils that are similar to Basinger soil but have limestone bedrock at a depth of 65 inches or more. These similar soils mainly are in the coastal and extreme eastern parts of the county.

The water table is at a depth of less than 10 inches for two to six months. During dry seasons, it recedes to a depth of 30 inches or more. Internal drainage is slow. Permeability is rapid. The available water capacity and natural fertility are both low.

Basinger fine sand, depressional – This soil is nearly level and poorly drained. It is in depressions and is adjacent to some bodies of water. The mapped areas are irregular in shape, long and narrow, or nearly circular and range from three to 50 acres. The slopes are less than two percent.

Typically, the surface layer is black fine sand five inches thick. The subsurface layer, to a depth of 24 inches, is light gray fine sand. The next layer, to a depth of 36 inches, is a mixture of gray subsurface material and dark brown and light brown subsoil material. The substratum, to a depth of 80 inches, is light gray sand.

Included with this soil in mapping are small areas of Adamsville, Eau Gallie, Immokalee, Myakka, and Tavares soils. Also included are a few small areas of soils that are similar to Basinger soil but have scattered limestone boulders at a depth of 60 inches or more and also a few depressional areas of soils on the upland ridges that are ponded about once in six years. The included soils make up less than 20 percent of the map unit.

This soil is ponded for a period of three to nine months. In slightly elevated positions around the margins of the ponded areas, the water table is within 10 inches of the surface, and these areas are ponded in years of heavy rainfall. In dry periods, the water table recedes to a depth of 10 inches or more. Permeability is very rapid. The available water capacity is low. Reaction ranges from extremely acid to mildly alkaline. Natural fertility is low.

Beaches - Beaches consists of narrow strips of nearly level fine sand along the Atlantic ocean. They are inundated with salt water daily at high tide. The soil is a mixture of quartz sand and shell fragments, is bare of vegetation, and is subject to movement by wind and tide.

Beaches, very frequently flooded - Beaches consist of narrow strips of nearly level poorly to very poorly drained fine sand along the Atlantic Ocean. These areas of sandy marine sediments are inundated with salt water daily at high tide and are in areas of 200 to 600 acres. This material is a mixture of quartz, sand, heavy minerals, principally rutile and ilmenite, and fragments of seashells. It is subject to movement by wind and tide and is bare of vegetation.

Bigbee fine sand - This is a nearly level excessively drained soil on low terraces along rivers that are occasionally flooded. Eighty percent of this unit is Bigbee fine sand. The typical soil profile has fine sand to a depth of 80 inches. The parent material contains sandy fluviomarine deposits. The available water capacity is low (about 4.3 inches). The depth to the water table is about 42 to 72 inches. The minor soil components are occasionally flooded Electra variant, Alpin and Blanton soils. These make up about 15 percent of the map unit. The remaining 5 percent contains non-hydric Leon soil.

Bigbee fine sand, undulating, occasionally flooded - This is a very deep, excessively drained soil on creek and river terraces. Typically, the surface layer is light brownish gray fine sand about 9 inches thick. Below this are layers of fine sand which to a depth of 20 inches is dark yellowish brown. Below this to 55 inches is pale brown grading to brown fine sand and to a depth of 80 inches is light gray fine sand. This Bigbee fine sand has a rapid permeability and an 80 inch depth to the seasonal high water table.

Bigbee-Garcon-Meggett complex, occasionally flooded – This complex makes up 80 percent of the unit. The typical profile contains fine sand in the surface and subsurface layers. The subsoil layer is typically sandy loam and sandy clay. The parent materials are sandy, loamy, and clayey marine and fluvial sediments. This soil is occasionally flooded. The available water capacity is very low to low in the Bigbee and Garcon soils. Available water capacity is high in the Meggett soil. The depth to the water table ranges from 0 inches in the Garcon soil to 72 inches in the Bigbee soil. The remaining 10 percent of this map unit are Chipley and Blanton soils.

Bivans sand, 2 to 5 percent slopes - This gently sloping, poorly drained soil is on relatively broad flats and at the base of slopes of the rolling uplands. The areas are irregular in shape and range from about 1 to 55 acres.

Typically, the surface layer is dark gray sand about 6 inches thick. The subsurface layer is gray sand 9 inches thick. It has a few nodules of ironstone and fragments of phosphatic limestone. The subsoil extends to a depth of 61 inches. It has a few fine and medium sized nodules and fragments of ironstone and phosphatic limestone. The upper 12 inches is dark gray, mottled sandy clay; the next 18 inches is gray, mottled sandy clay; and the lower 16 inches is gray, mottled sandy clay loam. Between depths of 61 to 81 inches, the underlying material is gray, mottled sandy clay loam.

Included with this soil in mapping are small areas of Blichton, Boardman, Lochloosa and Micanopy soils. Small areas of soils which are similar to Bivans soils but which have a very dark gray or black surface layer 7 to 14 inches thick over sandy clay subsoil are also included. Small areas of Bivans soils that have 0 to 2 Percent slopes are included in a few areas. Total included areas are less than 20 percent.

This Bivans soil has a perched water table that is in the surface and subsurface layers and the upper part of the subsoil for 1 to 4 months during most years. Surface runoff is moderate. The available water capacity is low to medium. Permeability is moderate to moderately rapid in the surface and subsurface layers. It is very slow to slow in the subsoil. Natural fertility is low to medium. Organic matter content of the surface layer is moderately low to moderate.

Bivans sand, 5 to 8 percent slopes - This is a sloping, poorly drained soil on short breaking slopes and along hillsides of the uplands. The areas are irregular and elongated in shape.

Typically, the surface layer is dark gray sand about 5 inches thick. The subsurface layer is light brownish gray sand about 5 inches thick, with a few nodules of ironstone and fragments of phosphatic limestone. The subsoil extends to a depth of 59 inches. The upper 20 inches is gray sandy clay and a few nodules of ironstone and fragments of phosphatic limestone. The next 29 inches is gray, mottled sandy clay. Between depths of 59 and 80 inches, the underlying material is gray, mottled sandy clay.

In this soil, the subsurface layer and upper part of the subsoil are saturated by a perched water table for 1 to 3 months during most years. Wetness is caused mainly by hillside seepage. Surface runoff is rapid, and the available water capacity is low to medium. Permeability is moderate to moderately rapid in the surface and subsurface layers and very slow to slow in the subsoil. Organic matter content is moderately low to moderate in the surface layer. Natural fertility is low to medium.

Bivans sand, 8 to 12 percent slopes - This strongly sloping, poorly drained soil is on uplands. The areas are on small, sharp-breaking slopes and long, irregularly shaped, seepy hillsides.

Typically, the surface layer is dark gray sand about 5 inches thick. The subsurface layer is dark grayish brown sand about 6 inches thick. Both layers are about 2 percent nodules of ironstone and fragments of phosphatic limestone. The subsoil is gray sandy clay to a depth of 56 inches and about 3 percent nodules of ironstone and fragments of phosphatic limestone. Between depths of 56 and 80 inches, the underlying material is light gray, mottled sandy clay.

This soil is saturated with a perched water table caused mainly by hillside seepage. The water table is less than 10 inches below the surface for 1 to 3 months during most years. Surface runoff is rapid, and the available water capacity is low to medium. Permeability is moderate to moderately rapid in the sandy surface and subsurface layers and very slow to slow in the subsoil. Organic matter content is moderately low in the surface layer. Natural fertility is medium.

Blanton-Alpin complex, 0 to 5 percent slopes, occasionally flooded – This complex makes up 83 percent of the soil map unit. Chipley, Albany, and Foxworth soils make up the remaining 17 percent. The typical profile contains fine sand in the surface and subsurface layers. The subsoil layer is typically sandy clay loam and loamy fine sand. The parent materials are sandy marine deposits and sandy and loamy marine sediments. This soil is occasionally flooded. The available water capacity is very low. The depth to the water table ranges from 3.5 feet in the Blanton soil to more than 6 feet in the Alpin soil.

Blanton-Alpin-Bonneau complex, 0 to 5 percent slopes – This complex makes up 91 percent of the soil map unit. Albany and Chipley soils make up the remaining 9 percent. The typical profile contains fine sand in the surface and subsurface layers. The subsoil layer is typically sandy clay loam and loamy fine sand. The parent materials are sandy marine deposits and sandy and loamy marine sediments. The Blanton and Alpin soils are occasionally flooded, while the Bonneau soils do not flood. The available water capacity is low to very low. The depth to the water table ranges from 3.5 feet in the Blanton soil, 5 feet in the Bonneau soil, to more than 6 feet in the Alpin soil.

Blanton-Bonneau-Ichetucknee complex, 2 to 5 percent slopes - This complex consists of nearly level to gently sloping soils on upland knolls and on broad, elevated, undulating karst landscapes. The major soil components contain Blanton (35 percent), Bonneau (25 percent), and Ichetucknee (15 percent). Some soils that make up this complex are as small as one-quarter acre. These soils are in areas that are so small or so intermingled that it was not practical to map them separately.

The Blanton and Bonneau soils make up about 35 percent and 25 percent of this complex, respectively. The typical soil profile for these soils has fine sand in the surface and subsurface layers. The subsoil contains fine sandy loam and sandy clam loam. Sandy and loamy marine deposits make up the parent materials. These soils are moderately well drained. The available water capacity is low (3.6 to 5.9 inches). The depth to the water table is 42 to 72 inches.

The Ichetucknee soil makes up about 15 percent of the complex. Typically, the soil profile has fine sand to 13 inches, clay from 13 to 55 inches, and weathered bedrock from 55 to 59 inches. This soil is somewhat poorly drained. The available water capacity is moderate (about 7.2 inches). The water table lies at about 6 to 8 inches from the surface.

The minor soil components are Albany, Alpin, Chiefland, Pedro Variant, Chipley, Lakeland and Ocilla. These soils make up about 25 percent of the complex.

Blanton-Bonneau-Ichetucknee complex, 5 to 8 percent slopes - This complex is on undulating landscapes. The areas of this complex mostly range from 3 to 40 acres, but some are as small as one-quarter acre. These soils are in areas that are so small or so intermingled that it was not practical to map them separately.

The Blanton soil makes up about 30 percent of the complex. Typically, the surface layer is gray fine sand 4 inches thick. The subsurface layer, which extends to a depth of about 49 inches, is very pale brown and white fine sand. The subsoil extends to a depth of 80 inches or more. In the upper 15 inches, it is pale brown sandy loam with yellow and strong brown mottles. In the lower part, it is light gray fine sandy loam with strong brown mottles.

The Blanton soil has a water table at a depth of 6 feet most of the year. A perched water table is above the subsoil for less than a month during wet seasons. The available water capacity is medium in the surface layer and low in the subsurface layer and subsoil. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. Natural fertility and the organic matter content are both low.

The Bonneau soil makes up about 25 percent of the complex. Typically, the surface layer is grayish brown fine sand 7 inches thick. The subsurface layer is pale brown fine sand to a depth of 24 inches and pale brown fine sand with very pale brown mottles to a dept of 30 inches. From the top, the subsoil is 3 inches of brownish yellow fine sandy loam; 15 inches of brownish yellow sandy clay loam; 12 inches of brownish yellow sandy clay loam with light yellowish brown and gray mottles; 12 inches of mottled brownish yellow, light gray, and red sandy clay loam with about 2 percent plinthite; and below that, light gray sandy clay with light yellowish brown and red mottles.

The Bonneau soil has a water table at a depth of 48 to 72 inches for a few weeks during most years. The available water capacity is low. Permeability is rapid in the surface and subsurface layers and slow in the subsoil. Natural fertility is moderate. The organic matter content is moderately low in the surface layer, low in the subsurface layer and upper part of the subsoil, and very low in the lower part of the subsoil.

The Ichetucknee soil makes up about 20 percent of the complex. Typically, the surface layer is grayish brown fine sand about 4 inches thick. The subsurface layer is dark grayish brown fine sand about 3 inches thick. The subsoil is clay and extends to a depth of 80 inches. It is yellowish brown in the upper 9 inches; mottled pale brown, yellowish brown, gray, and yellowish red to a depth of 38 inches; gray with strong brown and red mottles to a depth of 55 inches; and mottled gray, yellowish brown, and red clay in the lower part.

The Ichetucknee soil has a water table at a depth of 1.5 to 3 feet after intense rainfall. The available water capacity is medium in the surface and subsurface layers and lower part of the subsoil and is low in the upper part of the subsoil. Permeability is moderately rapid in the surface and subsurface layers and very slow in the

subsoil. Natural fertility is moderate. The organic matter content is moderate in the surface layer and moderately low in the subsurface layer and subsoil.

Included with this complex in mapping are a few small areas of Albany, Alpin, Chiefland, Pedro Variant, Chipley, Lakeland and Ocilla soils. Not all of these soils are in each mapped area. These soils make up about 25 percent of the map unit.

Blanton fine sand, 0 to 5 percent slopes - This is a moderately well drained, nearly level to gently sloping soil on broad ridges and undulating side slopes. Blanton fine sand make up 85 percent of this unit. Typically, the surface and subsurface layers are fine sand to a depth of about 52 inches. The subsoil is a fine sandy loam that extends to a depth of 80 inches. The parent material contains sandy and loamy marine deposits. The available water capacity is low (about 3.6 inches). Depth to the water table ranges from 48 to 72 inches. Included with this soil in mapping are small areas of Albany, Alpin, Chipley, Lakeland, Ocilla, Troup, and Bonneau soils. These soils make up less than 15 percent of the map unit.

Blanton fine sand, 5 to 8 percent slopes - This is a moderately well-drained, sloping soil on undulating landscapes. The areas of this soil range from 20 to 200 acres and are irregular in shape.

Typically, the surface layer is gray fine sand 4 inches thick. The subsurface layer, which extends to a depth of about 49 inches, is very pale brown and light gray fine sand. The subsoil extends to a depth of 80 inches or more. In the upper 15 inches, it is pale brown sandy loam with yellow and strong brown mottles. The lower part of the subsoil is light gray fine sandy loam with strong brown mottles.

Included with this soil in mapping are small areas of Albany, Alpin, Chipley, Lakeland, and Ocilla soils. These soils make up less than 15 percent of the map unit.

This Blanton soil has a water table at a depth of 5 to 6 feet most of the year. A perched water table is above the subsoil for less than a month during wet seasons. The available water capacity is medium in the surface layer and low in the subsurface layer and subsoil. Permeability is rapid in the surface ands subsurface layers and moderate in the subsoil. Natural fertility and the organic matter content are low.

Blanton - Ortega complex, 0 to 5 percent slope - This complex consists of nearly level to gently sloping, moderately well drained soils. Excessively drained soils occur on upland ridges. The major soil components of this complex contain Blanton (55 percent) and Ortega (26 percent). The typical soil profile for Blanton has fine sand to 44 inches and sandy clay loam to 80 inches. The typical soil profile for Ortega is fine sand to 80 inches. The parent materials for this complex contain sandy, loamy, or Eolian marine deposits. The available water capacity is low (about 3 to 4 inches). The depth to the water table is approximately 42 to 66 inches. The minor soil components, Albany, Penney and Ridgewood solids, make up 19 percent of this complex.

Blichton sand, 2 to 5 percent slopes - This gently sloping, poorly drained soil is on gently rolling uplands. Slopes are slightly convex. The areas are mostly irregular in shape and elongated and range from about 10 to 40 acres.

Typically, the surface layer is dark grayish brown sand about 6 inches thick. It is about 3 percent nodules of ironstone and fragments and nodules of phosphatic limestone. The subsurface layer extends to a depth of 28 inches. The upper 7 inches is grayish brown sand, and it has about 2 percent nodules of ironstone and fragments of phosphatic limestone. The next 15 inches is light brownish gray loamy sand. The subsoil extends to a depth of 80 inches or more. The upper 6 inches is dark gray sandy clay loam and are about 4 percent nodules of ironstone and fragments of phosphatic limestone. The next 28 inches is dark gray sandy clay loam that is about 10 percent plinthite and about 3 percent nodules of ironstone and weathered phosphatic limestone. The lower 18 inches is gray sandy clay loam that has dark reddish brown mottles.

Included with this soil in mapping are small areas of Bivans and Lochloosa soils. Small areas of poorly drained soils that have a 10- to 18-inch, black or very dark gray sandy surface layer over sandy clay subsoil are also included. Small areas of Blichton soils that have slopes of 0 to 2 percent or 5 to 8 percent are included in a few areas. A few areas mapped as Blichton soils contain less than 5 percent plinthite. Total included areas are about 12 percent or less.

In this Blichton soil, the subsurface layer and the upper part of the subsoil are saturated by a perched water table for 1 to 4 months during most years. Surface runoff is medium. The available water capacity is low in the sandy surface and subsurface layers and low to medium in the loamy subsoil. Permeability is rapid in the sandy surface and subsurface layers and slow to moderately slow in the loamy subsoil. Natural fertility is low to medium, and organic matter content is moderately low to moderate.

Blichton sand, 5 to 8 percent slopes - This sloping, poorly drained soil is on the rolling uplands. The areas are irregular in shape and elongated and range from about 5 to 45 acres.

Typically, the surface layer is dark gray sand about 5 inches thick. It is about 2 percent nodules of ironstone and fragments of phosphatic limestone. The subsurface layer is sand to a depth of 31 inches. The upper 21 inches is gray. The lower 5 inches is light gray. It is about 2 percent nodules of ironstone and fragments of phosphatic limestone. The subsoil extends to a depth of 78 inches. The upper 6 inches is light brownish gray sandy loam. It is about 4 percent nodules of ironstone and fragments of phosphatic limestone. The next 12 inches is light brownish gray sandy clay loam and are about 2 percent nodules of ironstone and fragments of phosphatic limestone. It is about 6 percent plinthite, by volume. The next 17 inches is light gray sandy clay loam and are about 1 percent nodules of ironstone and weathered fragments of phosphatic limestone. About 8 percent is plinthite, by volume. The lower 12 inches is light gray sandy clay loam. Between depths of 78 and 80 inches, the underlying material is gray sandy clay loam.

Included with this soil in mapping are small areas of Bivans, Boardman, Lochloosa and Wacahoota soils. Small areas of Blichton soils that have 2 to 5 percent slopes or have less than 5 percent plinthite are included. Total included areas are about 15 percent or less.

This Blichton soil is saturated by a perched water table within 10 inches of the surface for 1 to 4 months during most years. Wetness is caused by hillside seepage. Surface runoff is rapid. The available water capacity is low in the sandy surface and subsurface layers, and it is low to medium in the loamy subsoil. Permeability is rapid in the sandy surface and subsurface layers. It is slow to moderately slow in the loamy subsoil. Natural fertility is low to medium, and organic matter content is moderately low.

Boardman loamy sand, 5 to 8 percent slopes – This is a sloping, poorly drained soil on seepy hillsides in the upland. It has the profile described as representative of the series. Hillside seepage raises the water table to within 10 inches of the surface for 1 month to 4 months during most years. Surface runoff is rapid.

Included with this soil in mapping are a few small areas, of a similar soil, where the slope is 2 to 5 or 8 to 12 percent; small areas of Blichton, Fellowship, Flemington, Micanopy, and Wacahoota soils; a few small areas where the subsurface layer is gravelly and sandy and the subsoil is gravelly and loamy. Also included are a few areas, of a similar soil, where the content of gravel is less than 5 percent and a few small areas where the soil is moderately eroded. The rock outcrop and sinkholes that occur in some areas are identified by spot symbols on the soil map. Included soils make up about 20 percent of any one mapped area.

Boca fine sand - Boca fine sand is nearly level and poorly drained. It is on low, broad flats and in poorly defined drainageways on the flatwoods. The slopes are less than 2 percent.

Typically, the surface layer is dark grayish brown fine sand 5 inches thick. The subsurface layer, to a depth of 19 inches, is light gray fine sand. The next layer, to a depth of 21 inches, is yellow fine sand. The next layer, to a depth of 38 inches is grayish brown sandy clay loam underlain by limestone bedrock.

Included with this soil (about 25 percent of the map unit) are small areas of Basinger, EauGallie, Hallandale, Redlevel, and Myakka soils. Also included are some areas of soils near the Cross Florida Barge Canal that have been drained.

The water table is within 10 inches of the surface for 2 to 4 months in most years. It recedes into the limestone during dry periods. Permeability is rapid in the sandy layers and moderate in the finer textured layers. The available water capacity is low to very low in the surface and subsurface layers and moderate in the subsoil. Natural fertility is low.

Boca fine sand, depressional - Boca fine sand is nearly level and poorly drained. It is in depressions and other poorly defined drainageways along the coast. This soil is underlain by limestone bedrock at a depth of 24 to 40 inches; however, solution pits extending to a depth of 60 inches or more are common.

Typically, the surface layer is black fine sand 8 inches thick. The subsurface layer, to a depth of 21 inches, is light gray fine sand. The subsoil, to a depth of 25 inches, is grayish brown sandy clay loam. The next layer to a depth of 27 inches is a mixture of white limestone fragments, marl, and yellowish brown sandy clay loam underlain by limestone bedrock.

This soil is ponded for periods of 2 to 6 months in most years. The water table recedes below the surface during dry years. It is generally within 10 inches of the surface. In very dry periods, the water table recedes into the limestone. Permeability is rapid in the sandy layers and is moderate in the finer textured layers. The available water capacity is low to moderate, and the content of organic matter and natural fertility are low.

Boca-Holopaw, limestone substratum complex - This map unit consists of a moderately deep Boca soil and a deep or very deep Holopaw soil. These poorly drained, nearly level soils are on low ridges and flatwoods. Individual areas are generally irregular in shape and range from 3 to nearly 1,000 acres in size. Slopes range from O to 2 percent.

Boca-Pineda, limestone substratum complex – This complex consists of nearly level, poorly drained soils that are underlain by limestone bedrock. With slopes that range from 0 to 2 percent, these soils are adjacent to freshwater swamp areas that parallel the coast.

Boca soil, which comprises about 55 percent of the map unit, typically has a surface layer that is very dark brown fine sand 3 inches thick. The upper part of the subsurface layer, to a depth of 8 inches, is very pale brown fine sand. The lower part, to a depth of 22 inches, is yellow fine sand. The subsoil, to a depth of 32 inches, is light olive gray sandy clay loam. Below the subsoil is hard limestone bedrock.

About 30 percent of the map unit is the Pineda soil, which typically has a surface layer that is dark grayish brown fine sand 2 inches thick. The subsurface layer, to a depth of 5 inches, is grayish brown fine sand. The upper part of the subsoil, to a depth of 25 inches, is brownish yellow and strong brown fine sand. The lower part, to a depth of 42 inches, is light brownish gray sandy clay loam. Hard limestone bedrock is below the subsoil.

Included with these soils (about 15 percent of the map unit) are soils that have limestone bedrock at a depth of less than 24 inches. Small areas of rock outcrops are common in these shallow soils.

The soils in this complex have a high water table at a depth of less than 10 inches for 1 month to 6 months in most years. The water table recedes into the underlying limestone during the drier periods. During very wet

periods, some small areas are ponded. Permeability is rapid in the sandy layers and slow to moderate in the finer textured layers. The available water capacity is low to very low in the sandy layer and moderate in the finer textured layers. Natural fertility is low.

Bonneau fine sand, 2 to 5 percent slopes – This is a gently sloping, moderately well drained soil found in the uplands. Slopes are generally slightly convex. The water table is at a depth of 40 to 60 inches for 1 to 3 months and at a depth of 60 to 72 inches for 2 to 3 months during most years. Surface runoff is slow. Permeability is moderately rapid to rapid in the sandy surface and subsurface layers and moderately slow to very slow in the subsoil.

The surface layer is dark gray fine sand about 9 inches thick. The subsurface layer is brownish yellow fine sand to a depth of 29 inches. The subsoil extends to a depth of 84 inches or more and consists of yellowish brown fine sandy loam and gray mottled sandy clay loam. Organic matter content is low to moderately low in the surface layer.

Boulogne fine sand, 0 to 2 percent slopes – This consists of poorly drained soils located on flatwoods in the Lower Coastal Plain. It is derived from sandy marine sediments that formed linear shapes ranging from 3 to 50 acres in size.

Typically, the surface layer of the Boulogne fine sand is gray fine sand about 6 inches thick. The upper 10 inches of the subsoil is weakly developed, dark organic stained, brown fine sand that is coated with organic matter. The next 15 inches is very pale brown fine sand. The lower part of the subsoil, to a depth of 80 inches, is dark organic stained fine sand that is coated with organic matter. This part is dark reddish brown to a depth of 39 inches and black below this depth. Boulogne soils are slowly permeable.

Generally, the high water table is at a depth of 6 to 8 inches.

Broward fine sand – Nearly level and somewhat poorly drained, this soil is on broad flatwoods near the coast. It is underlain by limestone between depths of 20 and 40 inches. In some areas, scattered boulders and rocks are at or near the surface, and some previously cultivated areas have cobbles scattered across the surface. Rock outcrop occurs in a few areas.

Typically, the surface layer is very dark gray fine sand 5 inches thick. The upper part of the underlying material, to a depth of 15 inches, is gray fine sand. The lower part to a depth of 35 inches is brownish yellow fine sand underlain by limestone bedrock.

Included with this soil (about 20 percent of the map unit) are small areas of Boca and Redlevel soils. Also included are some areas of soils near the Cross Florida Barge Canal that have been drained.

The water table is at a depth of 20 to 30 inches for periods of 2 to 6 months. In very wet years, it may rise above 20 inches for brief periods. Permeability is rapid throughout, and the available water capacity is low to very low. Rain is rapidly absorbed, and runoff is slow. Natural fertility is low.

Broward-Lutterloh, limestone substratum, complex - This map unit consists of a moderately deep Broward soil and a very deep Lutterloh soil. These somewhat poorly drained nearly level soils are on low ridges. Individual areas are generally irregular in shape and range from 2 to nearly 2,000 acres in size. Slopes range from 0 to 2 percent.

Typically, the surface layer of the Broward soil is dark gray fine sand about 6 inches thick. The underlying material is a mixture of light yellowish brown and brownish yellow fine sand to a depth of 10 inches and yellowish brown fine sand to a depth of 25 inches. Limestone bedrock is at a depth of about 25 inches.

Typically, the surface layer of the Lutterloh soil is dark gray fine sand about 9 inches thick. The subsurface layer is light gray fine sand to a depth of about 35 inches and brown fine sand to a depth of 53 inches. The subsoil layer is light brownish gray fine sandy loam and extends to a depth 61 inches. Limestone bedrock is at a depth of about 61 inches.

Generally, the mapped areas average about 57 percent Broward and similar soils and 35 percent Lutterloh and similar soils. The components of this map unit are so intermingled that it is not practical to map them separately at the scale used in mapping. However, the proportions of the Broward and Lutterloh soils and of similar soils are fairly consistent in most mapped areas.

On 95 percent of the acreage mapped as Broward-Lutterloh, limestone substratum, complex, Broward, Lutterloh, and similar soils make up about 87 to 98 percent of the mapped areas. Dissimilar soils make up about 2 to 13 percent. On 5 percent of the acreage, the dissimilar soils make up more than 13 percent of the mapped areas.

Included in mapping are soils that are similar to the Broward soil but have bedrock at a depth of 12 to 20 inches, have a loamy or organically stained subsoil that over lies the bedrock, or have bedrock at a depth of 40 to 60 inches. Also included are soils that are similar to the Lutterloh soils but are sandy to a depth of 80 inches or more, have a dark surface layer that is more than 9 inches thick, or have bedrock at a depth of 40 to 60 inches.

The seasonal high water table is at a depth of 18 to 30 inches in the Broward and Lutterloh soils for 2 to 6 months during most years. Permeability is rapid in the Broward soil and moderate in the Lutterloh soil. Available water capacity is very low in both soils.

Candler clay, overwash, 0 to 2 percent slopes - This is a near level, well-drained soil that generally occurs as small areas along the lower parts of slopes and in slight depressions in the uplands of the southwestern part of the survey area. It has a profile similar to the one described as Candler Sand, but the upper 10 to 20 inches is mixed clayey mine wash from the mining of phosphate. The water table is at a depth of more than 72 inches.

Available water capacity is high in the clayey material, very low in the sandy material to a depth of about 78 inches, and low below. Permeability is slow in the clayey material, very rapid in the sandy material to a depth of about 78 inches, and rapid below. Natural fertility is medium in the clayey material and low in the sandy material. Organic-matter content is low.

Included with this soil in mapping are about 30 acres, of a similar soil, where the mine wash is 20 to 36 inches deep over the sandy soil, small areas where the mine wash is only 3 to 10 inches deep, and small areas where the water table is within a depth of 72 inches. Also included is about 10 acres where 20 to 30 inches of mine wash overlies a poorly drained sandy soil that has a loamy subsoil. Included soils make up about 20 percent of any one mapped area.

Candler fine sand, 0 to 5 percent slopes – This nearly level to gently sloping, excessively drained soil is in the deep, sandy uplands. Slopes are nearly smooth to convex. The areas are mostly irregular in shape and range from about 15 to 300 acres.

Typically, the surface layer is very dark grayish brown fine sand about 6 inches thick. The underlying layers are fine sand to a depth of 82 inches or more. The upper 10 inches is pale brown, the next 12 inches is light yellowish brown, the next 29 inches is yellow, the next 13 inches is very pale brown and has thin bands of brownish yellow loamy sand lamellae.

Included with this soil in mapping are small areas of Apopka, Arredondo, Chipley, and Tavares soils. Also included are small areas of excessively drained soils that have a sandy texture to 80 inches or more. These

excessively drained soils do not have thin bands of lamellae. A few areas of Candler soils that have slopes of 5 to 8 percent are include. Total included areas are 15 percent or less.

This Candler soil has low available water capacity. Permeability is rapid. Natural fertility of the soil is low. Organic matter content of the surface layer is low to very low. Surface runoff is very slow. The water table is at a depth of more than 72 inches.

Candler fine sand, 5 to 8 percent slopes - This sloping, excessively drained soil is in small areas on sharp breaking slopes and in relatively large areas on long, narrow slopes. The deep, sandy soil is on uplands. The areas vary from about 10 to 125 acres.

Typically, the surface layer is grayish brown fine sand about 5 inches thick. The underlying layers are fine sand to a depth of 85 inches or more. The upper 57 inches is yellow, and the lower 23 inches is pale brown. The lower part has thin lamellae of yellowish brown loamy sand and some thin streaks of clean sand grains that are light gray in color.

Included with this soil in mapping are small areas of Apopka and Tavares soils. Also included are small areas of an excessively drained soil that has sandy texture to a depth of more than 80 inches and does not have thin lamellae streaks or bands. A few small spots of Candler soils which have slopes of 0 to 5 or 8 to 12 percent are included. Total included areas are about 12 percent or less.

In this Candler soil, the available water capacity is low. Permeability is rapid. Natural fertility is low, and organic matter content is usually very low. Surface runoff is slow. The water table is more than 72 inches below the surface.

Candler-Urban land complex, 0 to 8 percent slopes - This complex consists of nearly level to moderately sloping Candler soils and areas of Urban land. Candler soils are mainly on lawns, vacant lots, and playgrounds. The Urban land part of the map unit is areas covered by buildings, streets, and parking lots. The individual areas of Candler soils and Urban land in this map unit are too mixed or too small to map separately at the scale used for the maps in the soil survey publication.

Candler soil makes up about 55 percent of the map unit. Urban land generally makes up about 35 percent. The included soils make up about 10 percent.

Typically, Candler soil has a surface layer that is gray fine sand about 3 inches thick. The subsurface layer, to a depth of 60 inches, is pale brown and light yellowish brown fine sand. Below the subsurface layer to a depth of about 80 inches is very pale brown fine sand that has scattered lamellae of dark yellowish brown sandy loam.

Included with these soils in mapping are small areas of Arredondo, Astatula, Lake, Paola, and Tavares soils. Also included are some areas of Urban land that make up more than 50 percent of the map unit.

Candler soil has a water table at a depth of more than 80 inches throughout the year. Permeability is rapid. The available water capacity is low to very low. This soil is very droughty during periods of low rainfall. Natural fertility is very low. If sloping areas are not protected by vegetation, runoff and the hazard of erosion is increased.

Cassia-Pomello complex– This unit is a poorly drained, very deep, nearly level soils are on low knolls and ridges on flatwoods. Individual areas are generally oval or elongated and range from 2 to nearly 1,200 acres in size. Slopes range from O to 2 percent. Typically, the surface layer of the Cassia soil is gray fine sand about 6 inches thick. The subsurface layer is light gray fine sand to a depth of about 24 inches.

Centenary Fine Sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and is moderately well drained. It is on slight rises on the broad flatwoods and along transitional areas on the uplands that are between the many small streams and creeks in the county. The mapped areas are irregular in shape and range from 20 to 85 acres. The slopes generally are convex.

Typically, this soil has a surface layer of very dark grayish brown fine sand bout 5 inches thick. The subsurface layer is fine sand. The upper part, to a depth of 10 inches is brown. The next layer, to a depth of 43 inches, is very pale brown with mottles. The lower part to a depth of 54 inches is light gray. The upper part of the subsoil to a depth of 60 inches is dark reddish gray fine sand. The lower part to a depth of 80 inches is dark reddish brown fine sand.

Included with this soil in mapping are small areas of Albany, Blanton, Ridgewood, and Ortega soils. The included soils make up about 15 percent or less of the map unit.

This soil has a high water table at a depth of 42 to 60 inches for 1 to 4 months during most years. During droughty periods, the water table is at a depth of more than 60 inches. The available water capacity is very low. The permeability is moderately rapid.

Chiefland-Pedro Variant complex, occasionally flooded – This complex consists of nearly level to sloping soils that are within 3 miles of rivers and creeks interspersed with numerous sinkholes. The Chiefland soils makes up about 41 percent of the complex. The Pedro Variant soils make up about 39 percent. The surface and subsurface layers are fine sand. They are underlain by about 3 inches of weathered bedrock. The Pedro Variant soil has unweathered bedrock at a depth of about 14 to 18 inches. The parent materials are sandy and loamy marine deposits over limestone. These soils are occasionally flooded from river overflow. The available water capacity is very low. The soils have no water table within a depth of 80 inches. The minor soil components include 20 percent Albany, Lakeland, Alpin, Troup and Rock outcrop.

Chiefland-Pedro Variant complex, 0 to 5 percent slopes – This complex consists of nearly level to gently sloping, well-drained soils on an upland karst landscape in the southern part of the county. The areas of these soils are so small or so intermingled that it was not practical to map them separately. The areas of this complex range from 5 to 800 acres.

The Chiefland soil makes up about 45 percent of the complex. Typically, the surface layer is brown fine sand about 8 inches thick. The subsurface layer is pale brown fine sand to a depth of 33 inches. The subsoil is strong brown fine sandy loam that extends to a depth of 39 inches. It is underlain by limestone.

The Chiefland soil has no water table within a depth of 72 inches. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is very low in the surface and subsurface layers and medium in the subsoil. The natural fertility and organic matter content are very low.

The Pedro Variant soil makes up about 35 percent of the complex. Typically, the surface layer is gray fine sand about 3 inches thick. The subsurface layer is dark brown fine sand about 5 inches thick. The subsoil is dark brown sandy clay loam about 3 inches thick. It is underlain by about 3 inches of soft weathered limestone. Below that, hard limestone extends to a depth of 80 inches or more.

The Pedro Variant soil has no water table within a depth of 72 inches. Permeability is rapid in the surface and subsurface layers and moderately rapid in the subsoil. The available water capacity is very low in the surface and subsurface layers and medium in the subsoil. The natural fertility and organic matter content are very low.

Soils of minor extent make up about 20 percent of the complex. These include Alpin, Lakeland, Troup and Albany soils. Not all of these soils are in each mapped area. Small areas of rock outcrops and sinkholes are common.

Chiefland-Pedro Variant complex, 5 to 8 percent slopes – This complex consists of sloping, well-drained soils on an upland karst landscape in the southern part of the county. The individual areas of each soil are so small or so intermingled that it was not practical to map them separately at the scale selected for mapping. The areas of this complex range from 5 to 50 acres.

The Chiefland soil makes up about 45 percent of the complex. Typically, the surface layer is brown fine sand about 8 inches thick. The subsurface layer is pale brown fine sand to a depth of 30 inches. The subsoil is strong brown fine sandy loam that extends to a depth of 35 inches. It is underlain by limestone.

The Chiefland soil has no water table within a depth of 72 inches. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is very low in the surface and subsurface layers and medium in the subsoil. The natural fertility and organic matter content are very low.

The Pedro Variant soil makes up about 35 percent of the complex. Typically, the surface layer is gray fine sand about 3 inches thick. It is underlain by about 3 inches of soft weathered limestone. Below that, hard limestone extends to a depth of 80 inches or more.

The Pedro Variant soil has no water table within a depth of 72 inches. Permeability is rapid in the surface and subsurface layers and moderately rapid in the subsoil. The available water capacity is very low in the surface and subsurface layers and medium in the subsoil. The natural fertility and organic matter content are very low.

Soils of minor extent make up about 20 percent of the complex. These include small areas of the Alpin, Lakeland, Troup, and Albany soils. Not all of these soils are in each mapped area. Small areas of rock outcrop and sinkholes are common.

Chipley fine sand, 0 to 5 percent slopes - This is a moderately welldrained, nearly level to gently sloping soil in somewhat depressed areas and on flats in the uplands. The areas range from 3 to 800 acres and are circular to irregularly elongated.

Typically, the surface layer is gray fine sand about 7 inches thick. Fine sand extends to a depth of 80 inches. In sequence downward, 23 inches is very pale brown and has yellow mottles; the next 10 inches is light gray and has very pale brown mottles; the next 20 inches is very pale brown and has brownish yellow, white and yellowish red mottles; and the lowermost 20 inches is white with brownish yellow and yellow mottles.

Included with this soil in mapping are small areas of Blanton, Alpin, Lakeland, Albany and Hurricane soils. These soils make up less than 15 percent of the map unit.

This Chipley soil has a water table at a depth of 20 to 40 inches for 2 to 4 months in most years. The water table is usually at a depth of 40 to 60 inches during the rest of the year. It recedes, however, to a depth of more than 60 inches during very dry periods. The available water capacity is very low, and permeability is rapid throughout the soil. Natural fertility and the organic matter content are low.

Chipley sand - This nearly level, somewhat poorly drained soil is in relatively small areas of the broad flatwoods and in both small and large areas on the transition between the broad flatwoods and rolling uplands. Slopes are nearly level to slightly concave and range from 0 to 2 percent. The areas are irregular in shape and range from about 15 to 150 acres.

Typically, the surface layer is sand about 12 inches thick. The upper 6 inches is very dark gray, and the lower 6 inches is dark grayish brown. The underlying layers are sand to a depth of more than 81 inches. In sequence from the top, the upper 13 inches is grayish brown; the next 24 inches is light gray and has yellowish red mottles; and the lower 32 inches is light gray but has no mottles.

Included with this soil in mapping are small areas of Myakka, Pompano, Tavares and Zolfo soils. Also included are a few small areas of somewhat poorly drained and poorly drained soils that have a very dark gray surface layer 10 to 16 inches thick over a grayish underlying layer. The underlying layer is sandy to a depth of 80 inches or more and has less than 5 percent silt and clay in the control section. About 15 acres mapped, as Chipley soil along the Santa Fe River is occasionally flooded. Total included areas are about 15 percent.

This Chipley soil has a water table that is 20 to 40 inches below the surface for 2 to 4 months during most years. During extremely wet seasons, the water table rises to a depth of 15 to 20 inches for brief periods of less than 2 weeks. It recedes to a depth of more than 40 inches during dry periods. Surface runoff is slow. The available water capacity is low, and the permeability is rapid to a depth of more than 80 inches. Natural fertility is low, and organic matter content is moderate to moderately low in the-surface layer.

Chobee-Bradenton complex, frequently flooded – This complex consists of very poorly drained, very deep Chobee soils, and poorly drained, very deep Bradenton soils. These nearly level, frequently flooded soils are on floodplains of rivers and creeks. Typically, the surface layer of the Chobee soil extends to a depth of about 11 inches. It is black fine sandy loam in the upper seven inches, and very dark gray fine sandy loam below. The subsoil layer extends to a depth of 48 inches. It is dark gray sandy clay loam with common pockets of soft calcium carbonate accumulations in the upper 26 inches, and gray sandy clay loam below that. The underlying material is greenish gray fine sandy loam to a depth of about 72 inches, and dark gray fine sand below.

Typically, the surface layer of Bradenton soil is black fine sand, and is about four inches thick. The subsurface layer is light brownish gray fine sand extending to a depth of about nine inches. The subsoil layer extends to a depth of about 28 inches. It is dark grayish brown sandy clay loam in the upper nine inches, and grayish brown fine sandy loam below that. The underlying material extends from a depth of about 28 inches to beyond a depth of 80 inches. It is white calcareous fine sandy loam to a depth of about 32 inches, strong brown loamy fine sand to a depth of about 48 inches, and light gray fine sand below that.

Chobee fine sandy loam, limestone substratum, frequently flooded - This very poorly drained, deep or very deep, nearly level soil is on flood plains. Individual areas are generally irregular in shape and range from 3 to nearly 3,500 acres in size.

Typically, the surface layer is very dark brown muck to depth of about 3 inches and very dark brown fine sandy loam to a depth of 11 inches. The subsoil is very dark grayish brown sandy clay loam to a depth of about 21 inches, light brownish gray sandy clay loam to a depth of 28 inches, dark greenish gray sandy clay loam to a depth of 54 inches, and a mixture of greenish gray and light greenish gray sandy clay loam to a depth of 68 inches. Limestone bedrock is at a depth of about 68 inches.

On most of the acreage mapped as Chobee fine sandy loam, limestone substratum, frequently flooded, Chobee and similar soils make up more than 85 percent of the mapped areas. Dissimilar soils make up less than 15 percent.

Included in mapping are soils that are similar to the Chobee soil but do not have bedrock within a depth of 80 inches, have bedrock at a depth of 20 to 40 inches, do not have a dark surface layer as much as 10 inches in thickness, have an organic surface layer that is 4 to 16 inches thick, have and average content of clay in the upper 20 inches of the subsoil that is more than 35 percent, or have a surface layer of fine sand, loamy fine sand, or sandy clay loam that is 4 to 20 inches thick.

The seasonal high water table is at or above the surface in the Chobee soil for more than 6 months during most years. Areas of this map unit are flooded by adjacent rivers or creeks for periods of more than 6 months during most years. Permeability is slow. Available water capacity is moderate.

Chobee-Gator complex, frequently flooded – This complex consists of very poorly drained, very deep Chobee and Gator soils. These nearly level, frequently flooded soils are on floodplains of rivers and creeks. Typically, the surface layer of the Chobee soil extends to a depth of about 19 inches. It is dark brown muck in the upper three inches, and very dark gray fine sandy loam below that. The subsoil is dark gray sandy clay loam, and extends to a depth of about 42 inches. The underlying material is gray loamy fine sand, and extends to beyond a depth of 80 inches. Typically, the surface layer of the Gator soil is black muck, and extends to a depth of about 26 inches. The underlying material extends beyond a depth of 80 inches. It is very dark gray fine sandy loam to a depth of about 40 inches, gray sandy clay loam to depth of about 52 inches, and light gray fine sand below that.

Citronelle fine sand – This soil, on the flatwoods, is nearly level and somewhat poorly drained. Limestone bedrock is at a depth of 20 inches or less.

Typically, the surface layer is dark yellowish brown fine sand 2 inches thick. The subsoil to a depth of 9 inches is yellowish red fine sand underlain by limestone bedrock.

Included with this soil (25 percent of the map unit) are areas of Boca, Broward, and Hallandale soils. Within the map unit are randomly scattered rock outcrops which range from 2 to 10 square feet. In some areas, the bedrock has been broken off and the surface layer is cobbly fine sand.

The high water table is within 2 to 3 feet of the surface for periods of up to 4 months. In drained areas, the water level fluctuates with the water level in the drainage ditches. Permeability is moderate to moderately rapid, and runoff is slow. Natural fertility is low.

Cornelia fine sand, 0 to 5 percent slopes - This is a nearly level to gently sloping, excessively drained soil on broad upland ridges and high bluffs along the Atlantic Coast. Slopes are convex.

Typically, the surface layer is very dark gray fine sand about 7 inches thick. The subsurface layer is fine sand about 39 inches thick. The upper 6 inches is gray and the lower 32 inches is white. The subsoil extends to a depth of 106 inches. It is fine sand, and the sand grains are coated with organic matter. The upper 14 inches is dark reddish brown, the next 20 inches is dark yellowish brown, the next 19 inches is dark brown, and the lower 14 inches is reddish brown.

This soil has a water table at a depth of more than 72 inches. Permeability is moderate in the weakly cemented layers and rapid in all other layers. Natural fertility is very low, and organic matter content is medium to high. Available water capacity is low.

Corolla fine sand, 2 to 6 percent slopes, rarely flooded - This moderately well and somewhat poorly drained gently sloping to sloping soil is on narrow dune-like ridges along the Atlantic Coast. Slopes are convex and concave. Typically, the surface layer is very pale brown fine sand about ten inches thick. The underlying material to a depth of about 80 inches is pale brown and light yellowish brown fine sand in the upper part; light gray fine sand in the lower part.

Corolla fine sand, gently undulating to rolling, rarely flooded - This is a somewhat poorly drained to moderately well drained sandy soil occurring on coastal dunes and are affected by salt spray near the Atlantic Ocean. Slopes are concave to convex.

Typically, the surface layer is a slighty acidic, very pale brown fine sand to a depth of 6 inches. Below this is a neutral to mildly alkaline surficial layer to 80 inches which is made up of the following: very pale brown fine sand from 6 to 12 inches; light yellowish brown fine sand to 20 inches; pale brown sand to 26 inches; light gray sand to 80 inches.

This soil has a very rapid permeability and the high water table is around 18 to 42 inches.

Cracker mucky clay, frequently flooded - This very poorly drained, shallow or very shallow, nearly level soil is in areas of tidal marsh. It is frequently flooded. Individual areas are generally irregular in shape and range from 9 to nearly 5,900 acres in size. Slopes are O to 1 percent. Typically, the surface layer is black mucky clay to a depth of about 4 inches and very dark gray sandy clay loam to a depth of 12 inches. Limestone bedrock is at a depth of about 12 inches.

Demory sandy clay loam, occasionally flooded - This poorly drained, nearly level, shallow to very shallow is on low ridges adjacent to or surrounded by areas of tidal marsh. Individual areas are generally irregular in shape and range from 2 to nearly 3,000 acres in size. Slopes range from 0 to 2 percent.

Typically, the surface is covered with several inches of undecomposed leaf litter. The surface layer is black muck about 3 inches thick. Below this is very dark grayish brown sandy clay loam about 4 inches thick. The underlying material is dark grayish brown sandy clay loam about 2 inches thick. Limestone bedrock is at a depth of 9 inches.

On 95 percent of the acreage mapped as Demory sandy clay loam, occasionally flooded, Demory and similar soils make up about 78 to96 percent of the mapped areas. Dissimilar soils make up about 4 to 22 percent. On 5 percent of the acreage, the dissimilar soils make up more than22 percent of the mapped areas.

Included in mapping are soils that are similar to the Demory soil but do not have a dark surface layer; have a surface layer of fine sand, loamy fine sand, fine sandy loam, or muck that is more than 3 inches thick; have more than 5 percent gravel in the surface layer; have bedrock within a depth of 4 inches; or are sandy throughout.

The seasonal high water table is within a depth of 12 inches for 2 to 6 months in most years. During dry periods it is within crevices and solution holes in the bedrock. Areas of this map unit are flooded by adjacent creeks or by stormdriven tides for periods of 2 to 7 days during some years. Permeability is moderately slow. Available water capacity is very low.

EauGallie fine sand - This is nearly level, poorly drained soil that is on the flatwoods. The slopes are gradual and less than 2 percent.

Typically, the surface layer is very dark and dark gray fine sand 10 inches thick. The subsurface layer, to a depth of 22 inches, is light brownish gray fine sand. The subsoil extends to a depth of 80 inches. The upper part is dark brown fine sand. The middle part is dark reddish brown fine sand. The lower part is pale olive and light gray fine sandy loam.

Included with this soil (less than 20 percent of the map unit) are small areas of Basinger, Immokalee, and Myakka soils. Also included are small areas of soils that are similar to EauGallie soil but have scattered limestone boulders in the subsoil.

The water table is within 10 inches of the surface for 1 month to 4 months. It recedes during dry periods but is generally within 40 inches of the surface layer for 6 months. Runoff is slow. The available water capacity is low to very low in the surface and subsurface layers and is moderate to high in the subsoil. Natural fertility is very low.

EauGallie fine sand, depressional – This soil is nearly level and very poorly drained. It is in depressions and is adjacent to drainageways on the flatwoods, as well as along the outer edges of some swamps and marshes. The slopes are smooth to concave and less than 2 percent.

Typically, the surface layer is black fine sand about 3 inches thick. The subsurface layer, to a depth of 26 inches, is light brownish gray and gray fine sand. The upper part of the subsoil, to a depth of 46 inches, is dark brown, pale brown, and grayish brown fine sand. The middle part, to a depth of 54 inches, is grayish brown fine sandy loam. The lower part to a depth of 80 inches is gray sandy clay.

Included with this soil are small areas of Basinger, Immokalee, Myakka, and Pompano soils. Also included are small areas of soils that are similar to EauGallie soil but have scattered boulders and cobbles in the subsoil and soils that have up to 10 inches of litter and organic matter on the surface.

In most years, this soil is ponded for 3 to 9 months. In slightly elevated positions around the margins of the ponded areas, the water table is within 10 inches of the surface, and these areas are ponded during periods of heavy rains. During dry periods, the water table recedes to a depth of 10 inches or more. Permeability is rapid in the surface and subsurface layers and is moderate in the subsoil. The available water capacity is low or very low in the surface and subsurface layers and is moderate in the subsoil. Natural fertility

Electra sand, 0 to 5 percent slopes – This is a nearly level to gently sloping, somewhat poorly drained soil that occurs as small and large areas in the flatwoods and the sandy uplands. The water table fluctuates between 25 to 40 inches for cumulative periods of 4 months during most years, but recedes to a depth of more than 40 inches during drier periods.

Included with this soil in mapping are small areas, of a similar soil, where the texture is fine sand and a few small areas of a soil having a slope of 5 to 8 percent. Also included are small areas of Astatula, Candler, Lynne, Placid, and Pomona soils. Included soils make up about 20 percent of any one mapped area.

Electra Variant fine sand, 0 to 5 percent slopes - This is a somewhat poorly drained, nearly level to gently sloping soil on low ridges adjacent to drainage ways and around swamps or depressions. Electra Variant soil makes up 80 percent of this unit. Typically, fine sand extends to a depth of 53 inches from the surface. A fine sandy loam extends from 53 to 80 inches. The parent materials are sandy and loamy marine deposits. The available water capacity is moderate (about 8.5 inches). This soil has a water table at a depth of 24 to 42 inches. Included in this map unit are small areas of Albany; Plummer, non-hydric; Mascotte; Sapelo; Leon, non-hydric; Hurricane and Pelham, non-hydric soils. These soils make up about 20 percent of the area.

Electra Variant fine sand, occasionally flooded - This is a somewhat poorly drained, nearly level to gently sloping soil on floodplains along rivers, creeks and other drainageways. This soil is flooded occasionally during March and April from abnormally heavy and prolonged rainfall over most of the Suwannee River and Santa Fe River drainage area. The lowlands remain flooded for about 30 days; the depressions that drain by percolation and seepage remain flooded for longer periods. Major floods occurred in March and April of 1948, 1959 and 1973. The areas of this soil range from 10 to 50 acres and are irregularly elongated in shape. The slope ranges from 0 to 5 percent.

Typically, the surface layer is gray fine sand about 2 inches thick. The fine sand subsurface layer extends to a depth of 39 inches. The upper 6 inches is light gray, the next 28 inches is white, and the lowermost 3 inches is grayish brown. The upper part of the subsoil is fine sand and extends to a depth of 54 inches. In the upper 11 inches, it is dark brown; and in the next 4 inches, it is dark yellowish brown. A layer of brown sandy loam 4 inches thick is between loam; and in the next 13 inches, it is gray sandy clay loam; and in the lowermost 6 inches, it is gray sandy clay loam with yellowish brown mottles.

Included with this soil in mapping are small areas of Plummer Muck, depressional; Bigbee and Mascotte soils; and Leon and Albany soils in areas that are occasionally flooded. Also included are soils that are similar to the Electra Variant soil but have iron concretions in the subsurface layer and subsoil. These soils makeup about 20 percent of the area.

This Electra Variant soil has a water table at a depth of 25 to 40 inches for about 4 months in most years. The water table recedes to a depth of more than 40 inches the rest of the year. This soil is flooded by the river during abnormal rainy conditions. The available water capacity is very low in the surface and subsurface layers and medium in the subsoil. The available water capacity is low in the layer between the upper and lower parts of the subsoil. Permeability is rapid in the surface layer and moderately rapid in the subsurface layer. It is moderate in the upper part of the subsoil and slow in the lower part of the subsoil, but it is moderately rapid in the slayer between the upper and lower parts of the subsoil. Organic matter content is moderately low in the surface layer; very low in the subsurface layer, in the lower parts of the subsoil, and in the layer between the upper and lower parts of the subsoil; and moderate in the upper part of the subsoil. Natural fertility is low. the upper and lower parts of the subsoil. The lower part of the subsoil extends to a depth of 80 inches or more. In the upper 3 inches, it is gray sandy clay

Elloree-Osier-Fluvaquents complex, frequently flooded - These soils are nearly level and are poorly drained or very poorly drained. They are on flood plains and in narrow or broad, elongated drainage ways. Individual areas are irregular in shape and range from about 100 to more than 30 acres in size. Slopes are nearly smooth and are 0 to 2 percent. Typically, the surface layer of the Elloree soil is very dark grayish brown loamy fine sand about 4 inches thick. The subsurface layer is light brownish gray and about 25 inches. The subsoil is gray and light gray sandy clay loam, which extends to a depth of about 62 inches. Below this to a depth of about 80 inches is white sand. Typically, the surface layer of the Osier soil is very dark gray fine sand about 7 inches thick. The underlying material to a depth of about 80 inches is fine sand. The upper 4 inches is gray, the next 8 inches is light brownish gray, the next 41 inches is light gray, and the lower 20 inches is white. Typically, the surface layer of the Fluvaquents is black mucky fine sand, about 2 inches thick. The underlying strata extend to a depth of 80 inches or more. In sequence downward, they commonly are dark gray sandy clay loam, pale brown silt loam with many fine and medium white shell fragments, very dark gray silt loam with few white shell fragments, very pale brown sandy loam with many fine and medium white shell fragments, light yellowish brown sandy loam with pockets of white sand, and white sand with many white shell fragments.

Emeralda fine sandy loam - This nearly level, poorly drained soil is in relatively small areas on rolling uplands of the prairies and in broad wet areas of the flatwoods. Slopes are nearly smooth and range from 0 to 2 percent. The areas are irregular in shape and range from about 15 to 100 acres.

Typically, the surface layer is about 10 inches thick. The upper 5 inches is black fine sandy loam, and the lower 5 inches is very dark gray sand. The subsurface layer is light brownish gray sand about 8 inches thick.

The subsoil is gray and extends to a depth of 56 inches. The upper 19 inches is sandy clay, and the lower 19 inches is sandy clay loam. Between depths of 56 and 80 inches, the underlying material is light gray sandy clay loam; the upper 10 inches of the underlying material has thin, discontinuous streaks of light gray sandy material that make up about 45 percent of its volume.

Included with this soil in mapping are small areas of Ledwith and Wauberg soils. Total included areas are about 15 percent.

This Emeralda soil has a water table that is less than 10 inches below the surface for 4 to 6 months during most years. The available water capacity is high in the surface layer, low in the subsurface layer, and medium to high in the subsoil. Permeability is rapid in the surface and subsurface layers and very slow to slow in the subsoil. Natural fertility is medium, and organic matter content is moderate to high in the surface layer.

Eunola fine sand, occasionally flooded - This soil is nearly level to gently sloping and is a somewhat poorly drained soil of low river terraces. Typically, the surface layer is dark grayish brown fine sand about 7 inches thick. To 12 inches is the subsurface layer made up of pale brown loamy fine sand. Below this the subsoil reaches to 65 inches and occurs in the following sequence from upper to lower layers: yellowish brown sandy clay loam; strong brown sandy clay loam; strong brown sandy clay and sandy clay loam that have gray, red,

and brown mottles; and brownish yellow loamy fine sand that has brown and red mottles. The substratum to about 80 inches is white fine sand that has brown mottles. The seasonal high water table is at 18 to 30 inches. Some soils occurring in this mapping unit are similar to this Eunola soil but have a sandy surface layer more than 20 inches thick.

Eunola loamy fine sand, 0 to 5 percent slopes, occasionally flooded - These are deep, moderately well drained soils along rivers and creeks. Typically, they have grayish brown loamy fine sand surface layers about 6 inches thick, underlain by a transition layer of light yellowish brown sandy loam to depths of 10 inches. Underlying this is a subsoil of dark yellowish-brown grading to yellowish brown sandy clay loam to depths of 54 inches. Below this to 68 inches is a layer of brownish yellow fine sandy loam that is transitional to the substrata at 80 inches or more and is very pale brown loamy sand that has strata of sandy loam. Included with this soil in mapping are small areas with similar soils of Blanton, Ocilla, and Wahee, and small areas with sandy surface layers more than 20 inches thick and that have a slope of 5 to 8 percent. Eunola soils have a moderate permeability and the seasonal high water table is at 18 to 30 inches below the soil surface from November through March during most years.

Eunola-Bonneau fine sands, 0 to 5 percent slopes - These soils are nearly level and gently sloping and are moderately well drained. They are on uplands. Sinkholes are common in some areas. Individual areas are irregular in shape and range from about 10 to more than 1,000 acres in size. Slopes are nearly smooth or convex. Typically, the surface layer of the Eunola soil is very dark grayish brown fine sand about 9 inches thick. The subsurface layer is pale brown fine sand. It extends to a depth of about 19 inches. The subsoil extends to a depth of about 63 inches. The upper 7 inches is yellowish brown fine sandy loam, the next 9 inches is yellowish brown sandy clay loam, and the lower 28 inches is mottled fine sandy loam. The substratum to a depth of about 80 inches is light gray fine sandy loam. Typically, the surface layer of the Bonneau soil is very dark grayish brown fine sand about 6 inches thick. The subsurface layer is fine sand. It extends to a depth of about 35 inches. The upper 10 inches is light yellowish brown, and the lower 19 inches is very pale brown. The subsoil to a depth of about 80 inches is sandy clay loam. The upper 9 inches is yellowish brown, the next 25 inches is light yellowish brown, and the lower 11 inches is mottled gray, yellowish brown, and strong brown.

Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes - This is nearly level to gently sloping, very poorly drained soil formed in depressions. Slopes are concave and are in areas of 3 to 125 acres.

Soil makeup of the Evergreen Series is as follows: organic horizon to 11 inches and is made up of black muck; to 14 inches is black loamy fine sand; to 17 inches is very dark gray fine sand; to 26 inches is light brownish gray fine sand; to 54 inches is dark reddish brown loamy fine sand; and to 80 inches is dark reddish brown fine sand.

Soil makeup of the Wesconnett Series is as follows: surface layer to 2 inches is fine sand; to 10 inches is black fine sand; to 26 inches is dark reddish-brown fine sand; to 32 inches is dark brown fine sand; to 44 inches is pale brown fine sand; to 72 inches is reddish black fine sand; and to 80 inches is very dusky red fine sand.

This extremely acid to strongly acid soil complex has a high water table that is at or near the surface for long periods and has moderately slow to rapid permeability.

Fellowship loamy sand, 5 to 8 percent slopes – This is a sloping, poorly drained soil on short, sharpbreaking slopes and long hillsides of the upland. It has a profile that is similar to the one described as representative of the series, but the surface layer is 1 inch to 3 inches thinner and the subsoil is slightly thinner. Surface runoff is rapid, and the hazard of erosion is severe. The soil ranges, by volume, from 5 to 20 percent gravel or rock fragments less than 3 inches in diameter. Wetness is caused by hillside seepage and the slowly permeable material, which severely restricts internal drainage. The water table is perched in the surface layer and the upper part of the subsoil. It is within 10 inches of the surface for about 1 month to 4 months during wet periods.

Included with this soil in mapping are small areas of a similar soil that is eroded; small areas of Flemington, Blichton, and Micanopy soils; and areas of a similar soil that is more than 35 percent gravel or phosphatic rock fragments. Also included are a few areas, of a similar soil, where the slope is 8 to 12 percent. Gullies have formed in a few cleared areas, and rock outcrop and sinkholes occur in many areas. The gullies, the rock outcrop, and the sinkholes are identified by spot symbols on the soil map. Included soils make up about 20 percent of any one mapped area.

Flemington loamy sand, 2 to 5 percent slopes – This is a gently sloping, poorly drained soil that occurs as small and large areas of the upland. The hazard of erosion is moderate because the infiltration rate is slow and surface runoff is medium. The subsurface layer and the upper part of the subsoil are saturated with a perched water table for 1 month to 4 months during most years.

Included with this soil in mapping are small areas of Fellowship, Blichton, Lochloosa, Micanopy, and Kanapaha soils; small areas, of a similar soil, where the surface layer is fine sand and the subsoil is sandy clay loam or sandy clay; and small areas where the subsoil is more than 5 percent plinthite. Also included are small areas of a similar soil that has a slope of 0 to 2 or 5 to 8 percent. The rock outcrop and sinkholes that occur in some areas are identified by spot symbols on the soil map. Included soils make up about 20 percent of any one mapped area.

Floridana-Basinger association, occasionally flooded – This association consists of poorly drained and very poorly drained soils in regular and repeating patterns along streams and rivers in the eastern part of the county. The Floridana soils are in the lowest places, and the Basinger soils are slightly higher. The areas are mostly long and narrow and generally adjacent to the Withlacoochee River. Individual areas of each soil range from 5 to 25 acres.

The very poorly drained Floridana soils make up about 55 percent of the association. Typically, the surface layer is very dark gray loamy fine sand about 14 inches thick. The subsurface layer is dark grayish-brown fine sand that extends to a depth of 24 inches. Beneath the subsurface layer is grayish brown sandy clay loam to a depth of 30 inches and gray sandy clay loam to a depth of 80 inches or more.

Floridana soils have rapid permeability in the surface layer and moderate permeability in the subsoil the available water capacity and natural fertility are medium. The organic matter content is high. The water table is at a depth of less than 10 inches for 1 to 4 months during most years, and the soil is frequently flooded.

The poorly drained Basinger soils make up about 30 percent of the association. Typically, the surface layer is black fine sand about 3 inches thick. The subsurface layer is light to brownish-gray fine sand about 5 inches thick. Beneath this to a depth of 24 inches is grayish-brown fine sand intermixed with very dark grayish-brown fine sand. Light gray and white fine sand extend to a depth of 80 inches or more.

Basinger soils have very rapid permeability. Available water capacity is very low. Natural fertility and organic matter content are low. Minor soils make up about 15 percent of the association. Delray soils are the most extensive.

Floridana sand, depressional - This nearly level, very poorly drained soil is in seasonally ponded, depressional areas and swamps. Slopes are less than 2 percent. The areas are variable in shape and range from about 15 to 75 acres.

Typically, the surface layer is black sand about 14 inches thick. The subsurface layer is gray sand to a depth of 30 inches. The subsoil extends to a depth of 65 inches. It is gray sandy clay loam. Between depths of 65 and 74 inches, the underlying material is light gray sandy loam.

Included with this soil in mapping are small areas of Riviera and Wauchula soils. Also included are some small areas of soils, which are similar to the Floridana soils except that the loamy subsoil is at a depth of 40 to 80 inches. In the center of some depressions are small areas where the surface is covered with 3 to 8 inches of organic material. About 80 acres mapped, as Floridana soil along the Santa Fe River is occasionally flooded. Total included areas are less than 20 percent.

This depressional Floridana soil has water standing on, the surface for about 6 months or more during most years. For much of the year, the water table is less than 10 inches below the surface. Available water capacity is medium to a depth of about 14 inches, low from 14 to about 30 inches, and medium below 30 inches. Permeability is rapid to 30 inches and slow between 30 to 74 inches. Natural fertility and organic matter content are high to about 14 inches and low below this depth.

Fluvaquents, frequently flooded - These nearly-level soils are poorly drained or very poorly drained. They are on flood plains and consist mainly of sandy, loamy, and clayey strata. In some areas, however, they have organic layers. The texture varies widely within short distances. Slopes are 0 to 2 percent.

Typically, the surface layer is black mucky fine sand about 2 inches thick. The underlying strata extend to a depth of about 80 inches. In a sequence downward, they commonly are: dark gray sandy clay loam; pale brown silt loam that has many fine and medium white shell fragments; very dark gray silt loam that has few white shell fragments; very pale brown sandy loam that has many fine and medium white shell fragments; light yellowish-brown sandy loam that has pockets of white sand; and white sand that has many white shell fragments.

Permeability is moderate in the Fluvaquents, and the available water capacity is low. The water table is at the surface during wet periods; during dry periods, it recedes to a depth of more than 20 inches. Flooding occurs during most years.

Fort Meade fine sand, 0 to 5 percent slopes - The nearly level to gently sloping, well drained soil is in both small and large areas on the gently rolling uplands.

Typically, the surface layer is fine sand about 14 inches thick. The upper 10 inches is very dark brown, and the lower 4 inches is very dark grayish brown. The underlying layer is fine sand to a depth of 80 inches or more. In sequence from the top: the upper 20 inches is dark brown; the next 9 inches is dark yellowish brown; the next 28 inches is yellowish brown; and lower 14 inches is dark brown.

In this soil, the available water capacity is low to medium. Permeability is rapid, and surface runoff is slow. The water table is more than 72 inches below the surface. Organic matter content of the surface layer is moderately low to high, and natural fertility is low.

Fripp-Corolla, rarely flooded, complex, gently undulating to hilly - This is an excessively drained to somewhat poorly drained soil of the dunes and is made up of sandy marine sediments. Slopes are smooth to concave or convex and individual areas range from 5 to 300 acres.

In the Fripp series, typically the surface layer is grayish brown fine sand about 6 inches thick. Below this, to a depth of 90 inches or more, is very pale brown moderately acid to neutral fine sand that contains horizontal bands of black heavy minerals.

This soil complex has a water table at a depth of more than 72 inches. Permeability is rapid throughout. Available water capacity and organic matter content are very low.

Fripp fine sand, rolling - This gently rolling to hilly, excessively drained soil is on narrow, dunelike ridges along the Atlantic coast. It is subject to flooding on rare occasions during prolonged, high-intensity storms. The

mapped areas range from about 3 to 300 acres. Slopes are smooth, convex, or concave and range from 5 to 20 percent.

In 99 percent of the areas mapped as Fripp fine sand, rolling, the Fripp soil makes up 94 to 100 percent of the map unit. Dissimilar soils make up 0 to 6 percent. The generally are in areas less than 3 acres in size.

Typically, the surface layer is light brownish gray fine sand about 4 inches thick. The underlying material, to a depth of 80 inches or more, is very pale brown fine sand.

Included in this map unit are small areas of dissimilar soils. These are Kureb, Newhan, and Resota soils. Kureb and Resota soils are on broad, nearly level ridges. Newhan soils are between the Fripp soils and Beaches.

Permeability of this Fripp soil is rapid. The available water capacity is very low or low. The seasonal high water table is at a depth of about 72 to 80 inches or more during most of the year. The soil is very low in natural fertility.

Gainesville loamy sand, 0 to 5 percent slopes - This is a near level to gently sloping, well-drained soil that occurs as small and large areas in the upland. This soil occurs in broad, undulating areas of the upland. It has the profile described as representative of the series. The water table is at a depth of more than 72 inches.

In a representative profile the surface layer is loamy sand about 10 inches thick. The upper 5 inches is very dark grayish brown, and the lower 5 inches is dark brown. The underlying material to a depth of more than 90 inches is loamy sand. The upper 13 inches is brown, and the lower 67 inches is strong brown.

Included with this soil in mapping are small areas, of a similar soil, where the texture is fine sand to a depth of more than 80 inches and a few spots, also of a similar soil, here the slope is 5 to 8 percent. Also included are small areas of Arredondo, Hague, Kendrick, and Zuber soils. Included soils make up less than 15 percent of any one mapped area.

Gainesville loamy sand, 5 to 8 percent slopes - This is a sloping, well-drained soil that generally occurs as small areas on sharp-breaking slopes in the upland. Surface runoff is slow, and the erosion hazard is slight. The water table is at a depth of more than 72 inches.

Included with this soil in mapping area few small areas of Arredondo, Hague, and Kendrick soils and areas of a well-drained soil that is fine sand to a depth of 80 inches or more. Also included are a few spots of a similar soil, where the slope is 0 to 5 or 8 to 12 percent of any one mapped area.

Gainesville sand, 0 to 5 percent slopes - This nearly level to gently sloping, well drained soil has sandy texture to a depth of 80 inches or more. It is in both small and large, irregularly shaped areas on the gently rolling uplands.

Typically, the surface layer is dark grayish brown sand about 7 inches thick, with an underlying layer that extends to a depth of 82 inches or more. The upper 22 inches is yellowish brown sand, and the lower 53 inches is strong brown loamy sand.

The water table is more than 72 inches below the surface. In this soil, the available water capacity is low, surface runoff is slow, and permeability is rapid. Organic matter content ranges from low to moderately low, and natural fertility is low.

Garcon-Albany-Meadowbrook complex, 0 to 5 percent slopes, occasionally flooded – The nearly level to gently sloping, somewhat poorly drained soils are on terraces, and the very poorly drained soils are in depressional areas of flood plains along the Suwannee River. Some areas are isolated by meandering stream

channels. The mapped areas are irregular in shape and range from about 20 to more than 150 acres in size. The slope is nearly smooth to convex.

Typically, the surface layer of the Garcon soil is dark gray fine sand about 7 inches thick. The subsurface layer is fine sand, and it extends to a depth of 26 inches. The upper 12 inches is brown, and the lower 7 inches is very pale brown. The subsoil is sandy clay loam and sandy loam to a depth of 51 inches. The upper 14 inches is brownish yellow sandy clay loam, and the lower 11 inches is light brownish gray sandy loam. Below this to a depth of 60 inches is white loamy fine sand. The next 20 inches is white fine sand to a depth of 80 inches or more.

Typically, the surface layer of the Albany soil is very dark gray fine sand about 4 inches thick. The subsurface layer is fine sand to a depth of 63 inches. The upper 10 inches is yellowish brown, the next 9 inches is brown, the next 4 inches is light brownish gray, and the lower 36 inches is light gray. The subsoil is sandy clay loam, and it extends to a depth of 80 inches. It is light gray to a depth of 65 inches and is mottled yellowish brown, pale brown, and light gray to a depth of 80 inches.

Typically, the surface layer of the Meadowbrook soil is black fine sand about 6 inches thick. The subsurface layer is fine sand, and it extends to a depth of 45 inches. The upper 8 inches is dark gray, and the lower 31 inches is light gray. The subsoil is grayish brown sandy clay loam to a depth of 63 inches and grayish brown sandy loam to a depth of 80 inches or more.

In 80 percent of areas mapped as Garcon-Albany-Meadowbrook complex, 0 to 5 percent slopes, occasionally flooded, Garcon, Albany, Meadowbrook, and similar soils make up 80 to 100 percent of the map unit. Generally, the mapped areas are about 65 percent Garcon and similar soils, 20 percent Albany and similar soils, and 15 percent Meadowbrook and similar soils. Garcon and Albany soils are in the higher areas, and Meadowbrook soils are in the depressions. The Meadowbrook soil is on slopes that are less than 2 percent. The components of this map unit are so intricately intermingled that it was not practical to map them separately. The proportions and patterns of Garcon, Albany, and Meadowbrook soils and similar soils are relatively consistent in most delineations of the map unit.

Soils that have dissimilar characteristics make up about 0 to 20 percent of the map unit. In 0 to 20 percent of the mapped areas, the dissimilar soils make up more then 20 percent of the unit. The dissimilar soils included in mapping are small areas of Blanton, Leon, Mandarin, and Ortega soils. Individual areas of inclusions are smaller then 5 acres in size. Mandarin and Leon soils have an organic-coated subsoil at a depth of 20 to 30 inches. Leon soils are also poorly drained and are on low parts of the landform. Blanton-Mandarin, and Ortega soils are moderately well drained and are on the higher parts of the landform.

A seasonal high water table is at a depth of 18 to 36 inches in the Garcon soils and at a depth of 12 to 30 inches in the Albany soil for 1 to 3 months during wet periods in most years. It recedes to a depth of more than 30 inches during dry periods. A seasonal high water table is above the Lafayette Blue Springs State Park Soils Descriptions A 3 - 3 surface of the Meadowbrook soil for 6 to 9 months during wet periods in most yeas. It recedes to a depth of more than 12 inches during dry periods. Flooding occurs in areas of the Garcon and Albany soils several times during a 10-year span. The duration and extent of flooding are variable, and they are directly related to the intensity and frequency of rainfall. The flooding occurs for less than 7 days in areas of the Garcon and Albany soils and for a few weeks to several months in areas of the Meadowbrook, depressional, soil. The excess water ponds in the lowest areas of the Meadowbrook soil. The available water capacity is low in the Garcon, Albany, and Meadowbrook soils. Permeability is moderate in the Garcon soil and moderately slow to moderate in the Albany and Meadowbrook soils.

Garcon-Eunola complex, 2 to 5 percent slopes, occasionally flooded – The nearly level, somewhat poorly drained and moderately well drained soils are on terraces along the Suwannee River. Some areas are isolated

by meandering stream channels. The mapped areas are irregular in shape and range from about 20 to more than 150 acres in size. The slope is nearly smooth to convex.

Typically, the surface layer of the Garcon soil is dark gray fine sand about 6 inches thick. The subsurface layer is fine sand, and it extends to a depth of 23 inches. The upper 10 inches is brown, and the lower 7 inches is very pale brown. The subsoil is sandy clay loam and sandy loam to a depth of 58 inches. The upper 15 inches is brownish yellow sandy clay loam, and the lower 20 inches is light brownish gray sandy loam. Below this to a depth is white fine sand to a depth of 80 inches or more.

Typically, the surface layer of the Eunola soil is very dark grayish brown fine sand about 6 inches thick. The subsurface layer is pale brown fine sand to a depth of 15 inches. The subsoil is sandy clay loam and sandy loam to a depth of 55 inches. The upper part is yellowish red, the next part is strong brown, and the lower part is yellowish red sandy loam. The underlying material is very pale brown fine sand to a depth of 80 inches or more.

In 80 percent of areas mapped as Garcon-Eunola complex, 2 to 5 percent slopes, occasionally flooded, Garcon and Eunola soils and similar soils make up 80 to 100 percent of the map unit. Generally, the mapped areas are about 65 percent Garcon and similar soils and 30 percent Eunola and similar soils. The components of this map unit are so intricately intermingled that it was not practical to map them separately. The proportions and patterns of Garcon and Eunola soils and similar soils are relatively consistent in most delineations of the map unit.

Soils that have dissimilar characteristics make up about 0 to 20 percent of the map unit. In 0 to 20 percent of the mapped areas, the dissimilar soils make up more than 20 percent of the unit. The dissimilar soils included in mapping are small areas of Blanton, Mandarin, and Ortega soils. Individual areas of inclusions are small than 5 acres in size. Mandarin soils have an organiccoated subsoil at a depth of 20 to 30 inches. Blanton and Ortega soils are moderately well drained ad are on the higher parts of the landscape. Blanton soils have a sandy epipedon at a depth of 40 to 80 inches, and Ortega soils are sandy to a depth of 80 inches or more.

A seasonal high water table is at a depth of 18 to 36 inches in the Garcon soil and at a depth of 18 to 30 inches in the Eunola soil for 1 to 3 months during wet periods in most years. It recedes Lafayette Blue Springs State Park Soils Descriptions A 3 - 4 to a depth of more than 30 inches during dry periods. Flooding occurs in areas of the Garcon and Eunola soils several times during a 10-year span. The duration and extent of flooding are variable, and they are directly related to the intensity and frequency of rainfall. The flooding occurs for less than 7 days in areas of the Garcon and Eunola soils. The available water capacity is low in both of these soils. Permeability is moderate.

Gator and Terra Ceia soils, frequently flooded – These very poorly drained, very deep nearly level soils are on flood plains along rivers and creeks. Individual areas are generally elongated and range from 2 to nearly 4,000 acres in size. Slopes are 0 to1 percent.

Typically, the surface layer of the Gator soil is very dark brown muck about 38 inches thick. The underlying material is gray fine sandy loam to a depth of 80 inches or more.

Typically, the surface layer of the Terra Ceia soil is a mixture of black and very dark grayish brown muck to a depth of about 37 inches and black muck to a depth of 80 inches or more.

Some areas of the map unit are made up of Gator and similar soils, some are made up of Terra Ceia and similar soils, and some are made up of both soils. The relative proportion of the combinations of the soils varies. Areas of the individual soils are large enough to map separately, but because of present and predicted use they were mapped as one unit.

On 80 percent of the acreage mapped as Gator and Terra Ceia soils, frequently flooded, Gator, Terra Ceia, and similar soils make up about 76 to 100 percent of the mapped areas. Dissimilar soils make up less than 24 percent. On 20 percent of the acreage, the dissimilar soils make up more than 24 percent of the mapped areas.

Included in mapping are soils that are similar to the Gator soils, but have a sandy layer that is more than 12 inches thick underlying the organic surface layer or have and organic surface layer that is less than 16 inches thick. Also included are soils that are similar to the Gator and Terra Ceia soils but have bedrock below a depth of 40 inches or are extremely acid in the surface layer.

Throughout the year the seasonal high water table is within a depth of 6 inches in the Gator and Terra Ceia soils. Areas of this map unit are flooded by adjacent rivers are creeks for periods of 1 to 6 months during most years. Permeability is moderate in the Gator soil and rapid in the Terra Ceia soil. Available water capacity is very high in both soils.

Goldhead fine sand, 0 to 5 percent slopes - This soil is very deep and poorly drained and is in the interstream divides of uplands. Typically, the surface layer is about 4 inches thick and black grading to dark gray fine sand. The subsurface layer is light gray fine sand to 36 inches. The subsoil is made up of dark gray sandy loam grading to very dark gray sandy loam to a depth of 80 inches. Included with this soil in mapping in the higher positions are areas of Albany and Wampee soils. Goldhead soils have moderate permeability and a seasonal high water table at the surface to a depth of 1 foot from July to March.

Hague sand, 2 to 5 percent slopes - This is a gently sloping, welldrained soil that occurs generally as small areas in the upland. Its available water capacity is moderate (about 6.7 inches). Flooding or ponding does not occur. The water table is at a depth of more than 80 inches.

This soil has a profile representative of the series. The surface layer is mixed very dark grayish brown and dark grayish brown sand 0 to 8 inches thick. The subsurface layer is sand about 16 inches thick. The upper 9 inches is light yellowish brown, and the lower 7 inches reddish yellow. The subsoil extends to a depth of 74 inches. It is, in sequence downward, 3 inches of strong brown sandy loam, 13 inches of yellowish red sandy clay loam, 9 inches of yellowish red sandy loam, and 25 inches of strong brown loamy sand. The underlying material to a depth of 82 inches is strong brown loamy sand.

Included with this soil in mapping are: small areas of Arredondo, Gainesville, Kendrick, and Zuber soils; a few areas of a similar soil, where the base saturation is less than 35 percent within a depth of 72 inches; and a few areas, also of a similar soil, where the surface layer is fine sand and loamy fine sand. Also included are a small acreage where the slope is 0 to 2 percent and a few areas where the subsoil is within a depth of 20 inches. Moderately eroded spots and sinkholes occur in some areas. Included soils make up about 15 percent of any one mapped area.

Hallandale-Boca-Holopaw complex - This map unit consists shallow or very shallow Hallandale soil, a moderately deep Boca soil, and a very deep Holopaw soils. These poorly drained, nearly level soils are on low ridges and flatwoods.

Typically, the surface layer of the Hallandale soil is light gray fine sand about 4 inches thick. The subsurface layer is white fine sand to a depth of about 12 inches. The subsoil is very pale brown fine sand to a depth of 19 inches. Limestone bedrock is at a depth of about 19 inches.

Typically, the surface layer of the Boca soil is dark gray fine sand about 4 inches thick. The subsurface layer is white fine sand to a depth of about 10 inches and very pale brown fine sand to a depth of 21 inches. The subsoil is light brownish gray sandy clay loam to a depth of about 25 inches. Limestone bedrock is at a depth of 25 inches.

Typically, the surface layer of the Holopaw soil is very dark gray fine sand about 4 inches thick. The subsurface layer is light gray fine sand to a depth of about 28 inches and very pale brown fine sand to a depth of 52 inches. The subsoil layer is gray sandy clay loam to a depth of 80 inches or more.

Generally, the mapped areas average about 35 percent Hallandale and similar soils, 28 percent Boca and similar soils, and 27 percent Holopaw and similar soils. The components of this map unit are so intermingled that it is not practical to map them separately at the scale used in mapping. However, the proportions of the Hallandale, Boca, and Holopaw soils and the similar soils are fairly consistent in most mapped areas.

On 80 percent of the acreages mapped as Hallandale-Boca-Holopaw complex, Hallandale, Boca, Holopaw and similar soils make up about 75 to 100percent of the mapped areas. Dissimilar soils make up less than 25 percent. On 20 percent
of the acreage, the dissimilar soils make up more than 25 percent of the mapped areas.

Included in mapping areas soils that are similar to the Hallandale soils but have a continuous, loamy subsoil that overlies the bedrock; have a dark surface layer that is more than 7 inches thick; or have bedrock within a depth of 4 inches. Also included are soils that area similar to the Boca soil but do not have a loamy subsoil at least 4 inches thick, have a loamy subsoil within a depth of 20 inches; or have bedrock at a depth of 40 to 80 inches. Also included are soils that are similar to the Holopaw soil but have bedrock at a depth of 40 to 80 inches, have a dark surface layer that is more than 7 inches thick, or do not have a loamy subsoil within a depth of 80 inches. Also included are soils that are similar to the Hallandale, Boca, and Holopaw soils but have a dark, organically stained subsoil that is more than 2 inches thick.

In most years the seasonal high water table is within a depth of 12 inches in the Hallandale, Boca, and Holopaw soils for 2 to 6 months, but it can be above the surface for 1 to 2 weeks following heavy rains of can recede to a depth of about 60 inches during droughty periods. Permeability is rapid in the Hallandale soil, moderate in the Boca soil, and moderately slow or moderate in the Holopaw soil. Available water capacity is very low in the Hallandale and Boca soils and Low in the Holopaw soil.

Hallandale-Rock Outcrop complex, rarely flooded - This complex consists of nearly level, poorly drained, mineral soil and rock outcrop. This soil is underlain by bedrock at a depth of 20 inches or less.

Typically, Hallandale soil has a surface layer that is black fine sand about 2 inches thick. The subsurface layer, to a depth of 6 inches, is grayish brown fine sand. The subsoil, to a depth of 10 inches, is yellowish brown fine sand. Below the subsoil is hard limestone bedrock. Rock outcrop is randomly scattered, and individual exposures are mostly less than 2 square feet.

Holopaw-Pineda complex, frequently flooded - These are poorly drained, very deep, nearly level soils on flood plains along rivers and creeks. Individual areas are generally elongated and range from 3 to nearly 300 acres in size. Slopes range from 0 to 2 percent.

Typically, the surface layer of the Holopaw soil is very dark gray fine sand about 3 inches thick. The subsurface layer is light brownish gray fine sand to a depth of about 50 inches and pale brown fine sand to a depth of 60 inches. The subsoil is gray sandy clay loam to a depth of 80 inches or more.

Typically, the surface layer of the Pineda soil is black fine sand about 4 inches thick. The upper part of the subsoil is brown fine sand to a depth of about 14 inches. The underlying material is light gray fine sand to a depth of about 28 and white fine sand to a depth of 35 inches. The lower part of the subsoil is light gray fine sandy loam to a depth of about 52 inches. The underlying material is gray
fine sand to a depth of 80 inches or more.

Generally, the mapped areas average about 55 percent Holopaw and similar soils and 29 percent Pineda soils and similar soils. The components of this map unit are so intermingled that it is not practical to map them separately at the scale used in mapping. However, the proportions of the Holopaw and Pineda soils and of the similar soils are fairly consistent in most mapped areas.

On 80 percent of the acreage mapped as Holopaw-Pineda complex, frequently flooded, Holopaw, Pineda, and similar soils make up about 76 to 93 percent of the mapped areas. Dissimilar soils make up about 7 to 24 percent. On 20 percent of the acreage, the dissimilar soils make up more than 24 percent of the mapped areas.

Included in mapping are soils that are similar to the Holopaw soil but do not have a loamy subsoil within a depth of 80 inches, have a dark surface layer that is more than 7 inches thick, or have a subsurface layer that has colors in shades of yellowish brown. Also included are soils that are similar to the Pineda soil but do not have a sandy subsoil that is more than 4 inches thick, do not have sandy pockets and intrusions in the upper 2 to 10 inches of the loamy subsoil, or have a dark surface layer that is more than 10 inches thick. Also included are soils that are similar to the Pineda and Holopaw soils but have bedrock or layers of shell fragments below a depth of 60 to 80 inches or have a surface layer of muck, loamy sand, or sandy loam that is more than 3 inches thick.

In most years, the seasonal high water table is within a depth of 12 inches in the Holopaw and Pineda soils for 2 to 6 months, but it can recede to a depth of about 60 inches during droughty periods. Areas of this map unit are flooded by adjacent rivers or creeks for periods of 1 to 4 months during most years. Permeability is moderate in the Holopaw soils and slow or very slow in the Pineda soil. Available water capacity is low in both soils.

Homosassa mucky fine sandy loam – Nearly level and very poorly drained, this soil is in coastal tidal marshes--primarily at elevations that are less than 3 feet above sea level. The slopes are less than 1 percent.

Typically, the surface layer is very dark gray mucky fine sandy loam about 10 inches thick. The next layer, to a depth of 18 inches, is very dark grayish brown loamy fine sand. The upper part of underlying layer, to a depth of 31 inches, is grayish brown loamy fine sand. The lower part to a depth of 35 inches is soft limestone bedrock underlain by hard limestone bedrock.

Included with this soil (about 20 percent of the map unit) are areas of soils that have a fine sandy loam or mucky sandy clay loam surface texture. Also included are areas of soils that have bedrock at a depth of 40 inches or more.

This soil is flooded daily by tides. The available water capacity is very high in the surface layer and is medium in the other layers.

Hurricane and Ridgewood soils, 0 to 5 percent slopes - These are nearly level to gently sloping soils of rises and knolls. They are somewhat poorly drained and are formed in thick deposits of marine sand. Slopes are convex and in areas of 3 to 150 acres.

Soil makeup of the Hurricane Series is as follows: surface layer to 5 inches is grayish brown fine sand; to 10 inches is yellowish brown fine sand; to 20 inches is light yellowish brown fine sand; to 39 inches is light gray fine sand; to 68 inches is dark brown fine sand; and to 80 inches is dark reddish brown fine sand.

Soil makeup of the Ridgewood Series is as follows: surface layer to 7 inches is gray fine sand; to 24 inches is light yellowish brown fine sand; to 29 inches is light yellowish brown fine sand; to 35 inches is pale brown fine sand; to 46 inches is light gray fine sand; and to 80 inches is light gray fine sand.

These are extremely to strongly acid soils that are rapidly to moderately slowly permeable and have a high water table at near surface to 42 inches. Acidity may be buffered in areas where limestone is present.

Hurricane fine sand - This is a somewhat poorly drained, nearly level soil on flats and in areas adjacent to depressions and poorly defined drainageways. The areas range from 10 to 200 acres and are circular to elongated. The slope ranges from 0 to 2 percent.

Typically, the surface layer is very dark gray fine sand about 8 inches thick. The fine sand subsurface layer extends to a depth of 56 inches. The top 10 inches is grayish brown, the next 14 inches is pale brown, and the lower 24 inches is light gray. The subsoil is dark brown fine sand, about 9 inches thick, over black fine sand that extends to a depth of 80 inches or more. The black color of the subsoil is due to the organic matter coating the sand grains.

Included with this soil in mapping are small areas of Albany, Chipley, Leon, Plummer and Sapelo soils. Also included are soils that are similar to the Hurricane soil but have a loamy subsurface layer. The included soils make up less than 15 percent of the map unit.

The Hurricane soil has a water table at a depth of 20 to 30 inches for 1 to 4 months during most years. Occasionally it rises above 20 inches for short periods. It recedes to a depth of 45 inches or more during dry periods. The available water capacity is low throughout. Permeability is rapid in the surface and subsurface layers and moderately rapid in the subsoil. Natural fertility is low. The organic matter content is medium in the surface layer, very low in the subsurface layer, and medium in the subsoil.

Ichetucknee fine sand, 2 to 5 percent slopes - This is somewhat poorly drained, gently sloping soil on small knolls and undulating terrain. Seventy-five percent of this unit consists of Ichetucknee fine sand. The typical profile has fine sand to a depth of 13 inches, clay from13 to 55 inches and weathered bedrock from 55 to 59 inches. The parent materials are sandy and clayey marine deposits over limestone. Available water capacity is moderate (about 7.2 inches). The depth to the water table is about 18 to 36 inches. Small areas of Bonneau and Goldsboro soils make up about 25 percent of the map unit.

Immokalee fine sand - This unit consists of poorly drained, very deep Immokalee soils. These nearly level soils are in flatwoods areas. Typically, the surface layer is very dark gray fine sand, and extends to a depth of about 9 inches. The subsurface layer is fine sand and extends to a depth of about 38 inches. It is gray in the upper 16 inches, and light gray below that. The subsoil extends to beyond a depth of 80 inches. It is very dark grayish brown, organically coated fine sand to a depth of about 43 inches, and dark brown fine sand below that.

Jonesville-Cadillac-Bonneau complex, 0 to 5 percent slopes - This complex consists of small areas of nearly level to gently sloping, well drained Jonesville and Cadillac soils and moderately well drained Bonneau soils. These soils are so intermixed that they cannot be separated at the scale of mapping. These soils are intermixed across the landscape. Individual areas of each soil range from about 1/10 of an acre to 5 acres. Mapped areas of this complex are irregular in shape and range from about 25 to 125 acres.

Jonesville sand makes up about 45 to 55 percent of each mapped area. Typically, the soil has a dark gray sand surface layer about 7 inches thick. The subsurface layer is pale brown fine sand to a depth of 29 inches. The subsoil extends to a depth of 33 inches and is brownish yellow sandy clay loam. Below this is white limestone to a depth of 80 inches or more. This limestone is soft enough to be dug with light power equipment, such as a backhoe.

In the Jonesville soil, the available water capacity is low in the sandy surface layer, low to very low in the sandy subsurface layer, and medium in the loamy subsoil. Permeability is rapid in the sandy surface and subsurface layers and moderately slow to moderate in the loamy subsoil. Organic matter content is moderately low. Natural fertility is low to medium. Surface runoff is slow. The water table is at a depth of more than 72 inches.

Cadillac fine sand makes up about 25 to 35 percent of each mapped area. Typically, the surface layer is dark gray fine sand about 7 inches thick. The subsurface layer is fine sand to a depth of 52 inches. The upper 22 inches is light yellowish brown, and the lower 33 inches is very pale brown. The subsoil extends to a depth of 76 inches. The upper 7 inches is yellowish brown fine sandy loam, and the lower 17 inches is strong brown sandy clay loam. Between a depth of 76 and 118 inches, the underlying material is clay. The upper 22 inches is yellowish brown and has mottles, and the lower 20 inches is gray and has some limestone fragments.

In the Cadillac soil, the available water capacity is low in the sandy surface and subsurface layers and medium in the loamy subsoil. Permeability is rapid in the sandy layers and slow to moderate in the loamy subsoil. Organic matter content is low to moderately low. Natural fertility is low in the sandy surface and subsurface layers and medium in the loamy subsoil. The water table in this soil is at a depth of more than 72 inches. Surface runoff is slow.

Bonneau fine sand makes up about 5 to I0 percent of each mapped area. Typically, the surface layer is dark gray fine sand about 9 inches thick. The subsurface layer is brownish yellow fine sand to a depth of 29 inches. The subsoil is sandy clay loam that extends to a depth of 84 inches or more. The upper 9 inches is yellowish brown, and the lower 47 inches is gray and has yellowish and brownish mottles.

In this Bonneau soil, the water table is about 40 to 72 inches below the surface for 1 to 3 months during most years. During dry seasons, it is more than 72 inches below the surface. Permeability is moderately rapid-to-rapid in the sandy surface and subsurface layers. It is moderately slow to moderate in the upper part of the subsoil and very slow to slow in the lower part. The available water capacity and the natural fertility are low in the sandy surface and subsurface layers and medium in the subsoil. Organic matter content is low to moderately low.

Included with these soils in mapping are many areas of soils that have pedon characteristics similar to the Pedro soils. Also included are some soils that have a grayish brown, sandy surface layer; a pale brown, sandy subsurface layer that extends a depth of 20 to 40 inches; and yellowish brown or strong brown sandy clay loam subsoil that reaches a depth of more than 60 inches. Some soils have sandy surface and subsurface layers 40 to 50 inches thick, subsoil 4 to 10 inches thick that is yellowish brown or strong brown sandy loam or sandy clay loam, and soft, white limestone at a depth of about 45 to 60 inches. Included in some areas are soils that have fine sand surface and subsurface layers less than 20 inches thick, a yellowish brown or strong brown sandy clay subsoil, and soft limestone at a depth of about 30 to 50 inches. Some areas have included soils that have pedon characteristics similar to the Arredondo and Candler soils. Limestone boulders and sinkholes are common. About 12 acres mapped, as this complex along the Santa Fe River is occasionally flooded. Total included areas are 5 to 15 percent of each mapped area.

Jonesville-Otela-Seaboard complex, 1 to 5 percent slopes – This map unit consists of a well drained, moderately deep Jonesville soil; a moderately well drained, very deep Otela soil; and a moderately well drained, shallow or very shallow Seaboard soil. These nearly level to gently sloping soils are on karst uplands. Individual areas are generally irregular in shape and range from 5 to more than 10,000 acres in size.

Typically, the surface layer of the Jonesville soil is gray fine sand about 5 inches thick. The subsurface layer is pale brown fine sand to a depth of about 14 inches and very pale brown fine sand to a depth of 27 inches. The subsoil is brownish yellow sandy clay loam to a depth of about 35 inches. Limestone bedrock is at a depth of about 35 inches.

Typically, the surface layer of the Otela soil is brown fine sand about 4 inches thick. The subsurface layer is light gray fine sand to a depth of about 22 inches, brownish yellow fine sand to a depth of 40 inches, very pale brown fine sand to a depth of 50 inches, and brownish yellow fine sand to a depth of 58 inches. The subsoil is yellowish brown sandy clay loam to a depth of 66 inches. Limestone bedrock is at a depth of about 66 inches.

Typically, the surface layer of the Seaboard soil is dark grayish brown fine sand about 8 inches thick. The underlying material is pale brown fine sand to a depth of about 17 inches. Limestone bedrock is at a depth of about 17 inches.

Generally, the mapped areas average about 48 percent of Jonesville and similar soils, 25 percent Otela and similar soils, and 16 percent Seaboard and similar soils. The components of this map unit are so intermingled that it is not practical to map them separately at the scale used in mapping. However, the proportions of the Jonesville, Otela, and Seaboard soils and of the similar soils are fairly consistent in most mapped areas.

On 95 percent of the acreage mapped as Jonesville-Otela-Seaboard complex, 1 to 5 percent slopes, Jonesville, Otela, Seaboard, and similar soils make up about 82 to 96 percent of the mapped areas. Dissimilar soils make up about 4 to 18 percent. On 5 percent of the acreage, the dissimilar soils make up more than 18 percent of the mapped areas.

Included in mapping are soils that are similar to the Jonesville soil but do not have a loamy subsoil or do not have bedrock within a depth of 40 inches. Also included are soils that are similar to the Otela soil but do not have a seasonal high water table within a depth of 72 inches, have a dark surface layer that is more than 10 inches thick, or have bedrock at a depth of 45 to 60 inches. Also included are soils that are similar to the Seaboard soil but have a loamy subsoil that overlies the bedrock, have a dark surface layer that overlies the bedrock or that is more than 10 inches thick, or have less than 5 percent silt and clay in the subsurface layer.

Dissimilar soils that are included with the Jonesville, Otela, and Seaboard soils in mapping occur as small areas of Bushnell, Candler, Levyville, Lutterloh, Mabel, Moriah, and Tavares soils; small areas of strongly sloping soils; and areas of rock outcrop on the edges of sinkholes. Bushnell, Candler, Levyville, Lutterloh, Mabel, Moriah, and Tavares soils are in positions on the landscape similar to those of the Jonesville, Otela, and Seaboard soils. Bushnell and Mabel soils have a clayey subsoil within a depth of 20 inches. They are somewhat poorly drained. Candler and Tavares soils are sandy to a depth of 80 inches or more. Levyville soils have a loamy subsoil within a depth of 20 inches. Moriah and Lutterloh soils are somewhat poorly drained.

Throughout the year the seasonal high water table is below that bedrock in the Jonesville and Seaboard soils. It is perched at a depth of 42 to 72 inches for 1 to 4 months during most years in the Otela soil. Permeability is moderately slow or moderate in the Jonesville soil, moderate in the Otela soil, and rapid in the Seaboard soil. Available water capacity is very low in the Jonesville and Seaboard soils and low in the Otela soil.

Jumper fine sand, 0 to 5 percent slopes – This is a near level to gently sloping, somewhat poorly drained soil that occurs as small areas in the flatwoods and along gentle slopes of the sandy uplands. The water table fluctuates between approximately 30 and 60 inches for 2 to 4 months during most years. For brief periods of about 2 weeks to 2 months, it is within a depth of 30 inches.

Included with this soil in mapping are a few areas of a similar soil that has a loamy sand surface layer, small areas of a similar soil that has a sandy clay subsoil or is less than 5 percent plinthite within a depth of 60 inches, and small areas of a somewhat poorly drained soil that has a sandy surface layer less than 20 inches thick. Also included are small areas of Apopka, Sparr, and Lynne soils and a few small areas where the slope is 5 to 8 percent. Included soils make up about 15 percent of any one mapped area.

Kanapaha sand, 0 to 5 percent slopes - This nearly level to gently sloping, poorly drained soil is in small to relatively large areas on uplands. Slopes are nearly smooth to slightly convex. The areas are irregular in shape and range from about 10 to 200 acres.

Typically, the surface layer is dark gray sand about 8 inches thick. The subsurface layer is sand about 36 inches thick. The upper 5 inches is light brownish gray, and the lower 31 inches is light gray. The subsoil is sandy clay

loam to a depth of 80 inches or more. The upper 6 inches is light brownish gray, and the lower 30 inches is gray.

Included with this soil in mapping are small areas of Blichton, Bivans, Lochloosa, and Wacahoota soils. Also included are small areas of soils that are similar to the Kanapaha soils except that the weighted average is more than 35 percent clay in the upper 20 inches of the subsoil. Small areas of Kanapaha soils that have 5 to 8 percent slopes are included. Also included are about 20 acres along the Santa Fe River that are occasionally flooded. Total included areas are about 20 percent or less.

This Kanapaha soil has a water table that is less than I0 inches below the surface for 1 to 3 months during most years. Surface runoff is slow. The available water capacity is very low-to-low in the sandy surface and subsurface layers, and it is low to medium in the subsoil. Permeability is moderately rapid in the surface and subsurface layers and is slow to moderately slow in the subsoil. Natural fertility is low to medium. Organic matter content of the surface layer ranges from moderately low to moderate.

Kenansville fine sand, 0 to 5 percent slopes, occasionally flooded – This very deep, well drained soil is on the flood plains of rivers and creeks. Typically, the surface layer is dark brown fine sand 9 inches thick. The subsurface layer extends to a depth of 23 inches and is yellowish brown fine sand. The subsoil reaches to 58 inches and is dark yellowish brown sandy loam in the upper parts and is yellowish brown sandy loam in the lower parts. Beneath this to 80 inches or more is light yellowish brown loamy sand that has yellowish brown loamy layers. The seasonal high water table is more than six feet below the surface and the soil will experience occasional flooding. Included in this mapping unit are small areas of Blanton and Ocilla soils, dissimilar soils, and soils with slopes of 5 to 8 percent having a loamy subsoil within a depth of 20 inches.

Kenansville loamy fine sand, occasionally flooded – This well-drained soil is nearly level to gently sloping and found on river terraces. Small sinkholes occur in some areas. This soil is occasionally flooded for long periods following prolonged, high intensity rains. Typically, the surface layer is dark gray loamy fine sand about 4 inches thick. The subsurface layer, to a depth of about 22 inches, is pale brown and pale yellow loamy fine sand. The subsoil is comprised of three parts: the upper part, to a depth of 26 inches, is brownish yellow fine sandy loam; the middle part, to a depth of 49 inches, is yellowish brown sandy clay loam; and the lower part, to a depth of 56 inches, is brownish yellow fine sandy loam. The substratum, comprised of two parts, is pale yellow fine sand on top (to a depth of 69 inches) and white fine sand underneath (to a depth of about 80 inches or more). This soil is moderately permeable and has a low available water capacity. The seasonal high water table is below 72 inches from the surface.

Kendrick fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and well drained. It occurs on upland ridges. The mapped areas are irregular in shape and range from 5 to 200 acres. The slopes are smooth to concave.

Typically, the surface layer is dark grayish-brown sand about 4 inches thick. The subsurface layer, to a depth of 28 inches, is yellowish brown and brownish yellow fine sand. The upper part of the subsoil, to a depth of 34 inches, is yellowish-brown fine sandy loam. The middle part, to a depth of 63 inches, is yellowish brown and strong brown sandy clay. The lower part to a depth of 80 inches is mottled strong brown, dark red, and light gray sandy clay loam.

Included in this soil in mapping are small areas of Arredondo, Lochloosa, Micanopy, and Williston soils. Also included are small areas of Kendrick soils that have slopes of 5 to 8 percent. The included soils make up about 20 percent of the map unit.

In most years, the water table is more than 6 feet below the surface throughout the year. Permeability is rapid in the sandy layers and moderately slow or slow in the subsoil. The available water capacity is low to

moderate in the sandy layers and high in the subsoil. Reaction is very strongly acid or strongly acid except where lime has been applied. Natural fertility is low.

Kendrick sand, 2 to 5 percent slopes – This is a gently sloping, well drained soil found on gently rolling uplands. The water table is more than 72 inches below the surface. Surface runoff is moderately slow. Permeability is rapid in the surface and subsurface layers and moderately slow in the subsoil.

Generally, the surface layer of this soil is dark grayish brown sand about 9 inches thick. The subsurface layer is yellowish brown loamy sand to a depth of 26 inches. The subsoil extends to a depth of 90 inches or more and consists of yellowish brown fine sandy loam and mottled yellowish brown sandy clay loam. Organic matter content is low to moderately low in the surface layer.

Kendrick sand, 5 to 8 percent slopes - This sloping, well-drained soil is usually in elongated areas on long slopes of uplands. The areas are small to relatively large and range from about 10 to 125 acres.

Typically, the surface layer is grayish brown sand about 6 inches thick. The subsurface layer is yellowish brown sand to a depth of 24 inches. The subsoil extends to a depth of 76 inches or more. The upper 5 inches of the subsoil is yellowish brown, mottled sandy loam; the next 27 inches is strong brown sandy clay loam; and the lower 20 inches is yellowish brown, mottled sandy clay loam.

Included with this soil are small areas of soils that are similar to Kendrick soils but have a brownish yellow or yellowish brown loamy subsoil less than 20 inches below the surface or have fine sand surface and subsurface layers. Also included are a few areas of
soils that are sandy clay at a depth of 20 to 40 inches. Small areas of Arredondo,
Blichton, Gainesville and Lochloosa soils are in some areas. A few areas of Kendrick
soils have 2 to 5 percent slopes or 8 to 12 percent slopes. Small moderately eroded spots are included in some areas. Limestone boulders and sinkholes are in some areas and are shown by appropriate symbols. Total included areas are about 20 percent.

In this Kendrick soil, the available water capacity is low in the sandy surface and subsurface layers and medium to high in the subsoil. Permeability is rapid in the sandy surface and subsurface layers, moderate in the upper part of the subsoil, and slow to moderately slow in the lower part. Natural fertility is low in the sandy layers and medium in the loamy subsoil. Organic matter content is low. The water table is more than 72 inches below the surface. Surface runoff is medium.

Kershaw fine sand, 2 to 8 percent slopes – This is a gently sloping or sloping, excessively drained soil on broad ridges and isolated knolls. Slopes are smooth to concave. Permeability is very rapid, and the available water capacity is very low. The seasonal high water table is at a depth of about 72 to 80 inches or more during most of the year.

In 98 percent of the areas mapped as this soil type, Kershaw and similar soils make up 92 to 100 percent of the mapped unit. Included are small areas of Ortega soils--dissimilar soils which make up 0 to 8 percent of the mapped unit. They are in lower positions on the landscape than the Kershaw soil.

Typically, the surface layer is very dark, grayish-brown fine sand about 7 inches thick. The underlying material is fine sand, to a depth of about 80 inches. It is yellowish brown in the upper part and yellow in the lower part. Some soils occurring in areas of this map unit are similar to the Kershaw soil but have a light-colored subsurface layer 1 to 4 inches thick.

Kershaw Sand, 0 to 8 percent slopes - This soil is nearly level to moderately sloping and is excessively drained. It is on the deep, sandy uplands. The mapped areas are irregular in shape and range form 15 to 1,500 acres. The slopes are nearly smooth to convex.

Typically, this soil has a surface layer of dark gray brown sand about 4 inches thick. The upper part of the underlying material, to a depth of 68 inches, is brownish yellow sand. The lower part to a depth of 80 inches is yellow sand.

Included with this soil in mapping are some small areas of Ortega, Penney, and Troup soils. Also included are small areas of soils that are similar to Kershaw soil but have a coarser texture. The included soils make up about 10 percent or less of the map unit.

This soil has a high water table at a depth of more than 80 inches. The available water capacity is very low. The permeability is very rapid.

Kureb fine sand, 2 to 8 percent slopes - This is a gently sloping to sloping, excessively drained soil on broad upland rises and dunes. These soils formed in thick beds of marine, fluvial, or eolian sand. Individual areas range in size from 3 to 600 acres. Slopes are convex.

Typically, the surface layer is dark gray fine sand about 4 inches thick. The next layer is white fine sand that extends to a depth of 16 inches. Below this, to a depth of 60 inches, is yellow fine sand that contains tongues of white fine sand from the layer above. Below this, to a depth of 82, is very pale brown fine sand that contains tongues similar to those in the layer above.

This soil has a water table at a depth of more than 72 inches. Permeability is rapid. Natural fertility and organic matter content are low. Available water capacity is very low.

Kureb-Resota fine sands, rolling - This excessively drained, nearly level to gently sloping soil is on broad upland ridges. Slopes are smooth. Typically, the surface layer is gray fine sand about five inches thick. The subsurface layer is light brownish gray fine sand about 14 inches thick. The subsoil extends to depths of 80 inches or more. It is strong brown fine sand with tongues of light gray fine sand in the upper part; and yellowish brown, brownish yellow, yellow, and very pale brown fine sand in the lower part.

Lakeland fine sand, 0 to 5 percent slopes - This is an excessively drained, nearly level to gently sloping soil on broad, slightly elevated ridges. The majority of this unit, 90 percent, is Lakeland find sand soil. The typical soil profile has fine sand to a depth of 80 inches. The parent materials are Eolian or sandy marine deposits. Available water capacity is low (about 4.1 inches). The depth to the water table is greater than 80 inches. The minor soil components, 10 percent, are Alpin, Blanton, Troup and Chipley.

Lakeland fine sand, 5 to 12 percent slopes - This is an excessively drained, sloping to strongly sloping soil on broad, slightly elevated ridges and around depressions. Lakeland fine sand makes up 90 percent of this unit. Typically, the profile consists of fine sand to a depth of 80 inches. The parent materials are Eolian or sandy marine deposits. The depth to the water table is greater than 80 inches. Available water capacity is low (about 3.9 inches). The minor soil components, Alpin, Blanton and Chipley, make up less than 10 percent of the map unit.

Lake fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and excessively drained. It is on the upland ridges. Typically, the surface layer is dark brown fine sand about seven inches thick. The underlying material to a depth of 80 inches or more is yellowish brown and brownish yellow fine sand.

The water table is more than 80 inches below the surface throughout the year. Internal drainage is rapid. The available water capacity is low or very low. Reaction is very strongly acid or strong acid except where lime has been applied. Natural fertility is low.

Lake fine sand, 5 to 8 percent slopes - This soil is moderately sloping and excessively drained. It is on side slopes on the uplands. The mapped areas are irregular in shape and range from 5 to 50 acres.
Typically, the surface layer is dark brown fine sand about 8 inches thick. The underlying material to a depth of 80 inches or more is yellowish brown, strong brown, and reddish yellow fine sand.

Included with this soil in mapping are small areas of Arredondo, Astatula, Candler, and Tavares soils. Also included are small areas of Lake soils that have slopes of less than 5 percent and small areas of Lake soils that have slopes of up to 12 percent. The included soils make up less than 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Internal drainage is rapid. The available water capacity is low or very low.
Reaction is very strongly acid or strongly acid except where lime has been
applied. Natural fertility is low.

Lake sand, 0 to 5 percent slopes - This is a nearly level to gently sloping, excessively drained soil that has sandy texture to a depth of more than 80 inches. Slopes are nearly smooth to convex. The soil is in irregularly shaped areas on the gently rolling uplands. The individual areas are both small and large in size and range from about 20 to 300 acres.

Typically, the surface layer is dark grayish brown sand about 8 inches thick. The underlying layer is sand to a depth of 82 inches or more. The upper 33 inches is yellowish brown, the next 28 inches is strong brown, and the lower 13 inches is yellowish brown and has thin streaks of light gray, clean sand grains.

Included with this soil in mapping are small areas of Arredondo, Candler, Gainesville and Tavares soils. Also included are a few small areas of Lake Soils that have 5 to 8 percent slopes. About 10 acres mapped, as this soil along the Santa Fe River is occasionally flooded. Total included areas are about 15 percent or less.

Available water capacity in this Lake soil is very low-to-low. Permeability is rapid to very rapid. Organic matter content and natural fertility are low. Surface runoff is very slow. The water table is more than 72 inches below the surface.

Lake sand, 5 to 8 percent slopes - This soil is moderately sloping and excessively drained. It is on side slopes on the uplands. The mapped areas are irregular in shape and range from 5 to 50 acres.

Typically, the surface layer is dark brown fine sand about 8 inches thick. The underlying material to a depth of 80 inches or more is yellowish brown, strong brown, and reddish yellow fine sand.

Included with this soil in mapping are small areas of Arredondo, Astatula, Candler, and Tavares soils. Also included are small areas of Lake soils that have slopes of less than 5 percent and small areas of Lake soils that have slopes of up to 12 percent. The included soils make up less than 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Internal drainage is rapid. The available water capacity is low or very low. Reaction is very strongly acid or strongly acid except where lime has been applied. Natural fertility is low.

Ledwith muck - This nearly level, very poorly drained soil is in small to relatively large areas of freshwater marshes and wet prairies. Slopes are nearly smooth to slightly concave and are less than 2 percent. The areas are irregular or elongated in shape and rang from about 15 to 100 acres.

Typically, the surface layer is about 15 inches thick. The upper 9 inches is dark brown muck, and the lower inches are black sandy loam. The subsurface layer is loamy sand about 2 inches thick. The subsoil is sandy clay to a depth of 62 inches. The upper 8 inches of the subsoil is very dark gray, the next 19 inches is dark gray and the lower 18 inches is gray. Between depths of 62 and 84 inches, the underlying material is gray sandy clay.

Included with this soil in mapping are small areas of Shenks and Surrency soils. Total included areas are about 15 percent or less.

This Ledwith soil has a water table that is within 10 inches of the surface for more than 6 months during most years. Most areas have water ponded on the surface for 4 months or more. The available water capacity is very high in the upper, 9-inch-thick organic surface layer, medium to high in the mineral surface subsurface layers, and low to medium in the clayey subsoil. Permeability is rapid in the organic surface layer, moderate to rapid in the mineral surface and subsurface layers, and slows to very slow in the clayey subsoil. Natural fertility is medium. Organic matter content in the upper 9
inches is very high.

Leon fine sand - This soil is nearly level and poorly drained. It is in broad areas on the flatwoods. The mapped areas are irregular in shape or elongated and range from 10 to 100 acres. Slopes are smooth and range from 0 to 2 percent.

Typically, this soil has a surface layer of very dark gray fine sand about 4 inches thick. The subsurface layer, to a depth of about 16 inches, is light gray fine sand. The subsoil is fine sand. The upper part, to a depth of 20 inches, is black. The sand grains are well coated with organic material. The next layer, to a depth of 26 inches, is very dark grayish brown with organic coatings on the sand grains. Below that layer, to a depth of 67 inches, the subsoil is dark brown. The lower part to a depth of 80 inches is black with organic coatings on most of the sand grains.

Leon fine sand, 0 to 2 percent slopes, very frequently flooded - This is a nearly level, very poorly drained soil in tidal marsh areas. This soil is formed in thick beds of marine sand. Individual areas range from 3 to 50 acres in size.

Typically, the surface layer is fine sand about 8 inches thick. In the upper 5 inches it is very dark gray, and in the lower 3 inches it is dark gray. The subsurface layer is gray fine sand about 18 inches thick. The subsoil is fine sand that extends to a depth of more than 80 inches. The upper 8 inches of subsoil is black and weakly cemented, the next 11 inches is very dark gray and weakly cemented, the next 8 inches is dark reddish brown, and the lower 35 inches is dark reddish brown and weakly cemented.

Under natural conditions, this extremely to slightly acidic soil has a water table at or near the surface. Permeability is moderate to moderately rapid in the weakly cemented layers and rapid in all other layers. Natural fertility is low, and organic matter content is medium. Available water capacity is moderate.

Leon fine sand, tidal - This nearly level, very poorly drained soil is in narrow tidal marshes bordering flatwoods. It is subject to flooding by normal high tides. The mapped areas range from about 3 to 50 acres. Slopes are smooth and are 0 to 2 percent.

In 96 percent of the areas mapped as Leon fine sand, tidal, Leon soils make up 88 to 100 percent of the map unit. Dissimilar soils make up about 0 to12 percent. They generally are in areas less than 3 acres in size.

Typically, the surface layer is fine sand about 26 inches thick. It is dark gray in the upper part and very dark gray in the lower part. The upper part of the subsoil, to a depth of about 40 inches, is dark grayish brown and dark brown fine sand. Separating the upper and lower parts of the subsoil, to a depth of about 43 inches, is a

buried subsurface layer of light gray fine sand. The lower part of the subsoil, to a depth of about 58 inches, is dark brown fine sand. The substratum, to a depth of 80 inches or more, is dark olive gray fine sand.

Included in this map unit are small areas of dissimilar soils. These are Tisonia soils and Arents. Arents are higher on the landscape than the Leon soils, and Tisonia soils are lower.

Permeability of this Leon soils is moderately rapid in the surface layer and moderate or moderately rapid in the subsoil and the substratum. The available water capacity is low to high. The seasonal high water table is at or near the surface during most of the year. The soil is low in natural fertility.

Lochloosa fine sand, 0 to 2 percent slopes - This nearly level, somewhat poorly drained soil is in relatively small to large areas in the broad flatwoods and the gentle, rolling uplands that border the flatwoods. Slopes are nearly smooth to slightly convex. The areas are irregular in shape and range from about 10 to 200 acres.

Typically, the surface layer is very dark gray fine sand about 7 inches thick. The subsurface layer is fine sand to a depth of 34 inches. The upper 7 inches is brown, and the lower 20 inches is very pale brown and has grayish and yellowish mottles. The subsoil extends to a depth of 80 inches or more. The upper 10 inches is pale brown, mottled very fine sandy loam; the next 13 inches is light brownish gray, mottled very fine sandy loam; and the lower 23 inches is gray, mottled sandy clay loam.

Included with this soil are small areas of Bonneau, Millhopper and Sparr soils. Also included are a few small areas of somewhat poorly drained soils that have a sandy surface and subsurface layer 10 to 18 inches thick over a mottled, yellowish brown and gray sandy clay loam subsoil. In the Orange Heights, area there are about 250 acres of soils that are similar to Lochloosa soils but have about 5 to 10 percent plinthite in the subsoil. A few small areas of Lochloosa soils that have slopes of 2 to 5 percent are included. Total included areas are about 15 percent or less.

This Lochloosa soil has a water table that is 30 to 40 inches below the surface for 2 to 4 months during most years. It rises to 15 to 30 inches for 2 to 4 weeks during most years. Surface runoff is slow. The available water capacity is medium to high in the sandy surface and subsurface layers and medium in the subsoil. Permeability is rapid to very rapid in the surface and subsurface layers, moderate in the upper part of the subsoil, and slow in the lower part. Natural fertility is low in the sandy surface and subsurface layers and medium in the loamy subsoil. Organic matter content is low to moderately low in the surface layer.

Lochloosa fine sand, 2 to 5 percent slopes – This is a somewhat poorly drained soil found on rolling uplands. Slopes are slightly convex. The water table is about 30 to 40 inches below the surface for 1 to 4 months during most years. The water table may rise to a depth of 20 to 30 inches for 1 to 3 weeks. Surface runoff is slow. Permeability is rapid in the surface and subsurface layers, moderate in the upper part of the subsoil, and slow in the lower part.

The surface layer is dark gray fine sand about 7 inches thick. The subsurface layer is yellowish brown loamy sand or sand to a depth of 31 inches. It has light gray and yellowish brown mottles below a depth of 21 inches. The subsoil extends to a depth of 76 inches and consists of gray or greenish sandy clay loam. Organic matter content is low to moderately low in the surface layer.

Lochloosa fine sand, 5 to 8 percent slopes - This sloping, somewhat poorly drained soil is in relative small areas on sharp breaking slopes and along long, narrow slopes of the upland. The areas are mostly irregular or elongated in shape and range from about 10 to 50 acres.

Typically, the surface layer is grayish brown fine sand about 5 inches thick. The subsurface layer is light yellowish brown, mottled fine sand to a depth of 25 inches. The subsoil extends to a depth of 67 inches. The upper 5 inches is yellowish brown, mottled sandy loam; the next 5 inches is mottled light yellowish brown and

gray sandy clay loam; and the lower 32 inches is gray, mottled sandy clay loam. Between depths of 67 to 80 inches, the underlying material is gray, mottled sandy clay and fine pockets of sandy loam and sandy clay loam.

Included with this soil are small areas of Blichton, Kendrick, Micanopy and Norfolk soils. Also included are small areas of soils that are similar to Lochloosa soils in drainage and texture but have subsoil less than 20 inches below the surface. Small areas of Lochloosa soils that have 2 to 5 percent slopes are included. Small moderately eroded spots are in some areas. Rock outcrops and sinkholes are in some areas. Total included areas are about 20 percent.

This Lochloosa soil has a water table that is about 30 to 40 inches below the surface for 1 to 3 months during most years. The water table may be at a depth of 20 to 30 inches for 1 to 3 weeks. Wetness is caused by hillside seepage. Surface runoff is medium on this soil. The available water capacity is low in the sandy surface layer and medium in the subsoil. Permeability is rapid in the surface and subsurface layers, moderate in the upper part of the subsoil, and slow in the lower part. Natural fertility is low in the sandy surface and subsurface layers and low to medium in the loamy subsoil. Organic matter content is low in the surface layer.

Lovett sand, 5 to 8 percent slopes – This gently sloping to sloping, moderately well-drained soil is on short side slopes on the uplands. Typically, the surface layer is dark grayish brown sand about 6 inches thick. The subsurface layer, to a depth of about 36 inches, is brownish yellow sand that has pale brown mottles. The subsoil, which extends to a depth of about 80 inches, is comprised of two parts. The upper part is brownish yellow sandy clay loam and the lower part is reticulately mottled red, gray, and yellowish-brown clay. Soil permeability is slow to moderately slow, and available water capacity is low to medium. The seasonal high water table is perched at a depth of 36 to 54 inches.

Lucy loamy fine sand, 2 to 5 percent slopes – This is a welldrained, gently sloping soil on broad upland ridges. The areas range from 5 to 40 acres and are irregular in shape.

Typically, the surface layer is dark brown loamy fine sand about 6 inches thick. The subsurface layer, in sequence downward, is yellowish brown loamy sand, strong brown loamy fine sand, and strong brown loamy sand. The fine sandy loam subsoil is yellowish red and extends to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Blanton, Bonneau, Orangeburg, and Troup soils. Also included are small areas of soils that are similar to the Lucy soil but have rock within a depth of 60 inches. The included soils make up about 15 percent of the map unit.

The water table is below a depth of 72 inches at all times. The available water capacity is medium in the surface layer, low in the subsurface layer, and medium in the subsoil. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. Natural fertility and the organic matter content are low.

Lucy loamy fine sand, 5 to 8 percent slopes - This is a welldrained, sloping soil on broad to narrow sides of upland ridges. The areas range from 5 to 40 acres and are irregular in shape.

Typically, the surface layer is dark brown loamy fine sand about 6 inches thick. The subsurface layer is yellowish brown loamy fine sand 10 inches thick. Below this is a strong brown loamy fine sand to a depth of 20 inches. The subsoil extends to a depth of 80 inches or more. The upper 7 inches is strong brown fine sandy loam. It is underlain by yellowish red sandy clay loam.

Included with this soil in mapping are small areas of Blanton, Bonneau, Orangeburg, and Troup soils. Also included are small areas of soils that are similar to the Lucy soil, but some have rock within a depth of 60 inches and some are sandy clay loam to a depth of 20 inches. The included soils make up about 20 percent of the map unit.

The water table is at a depth of more than 72 inches at all times. The available water capacity is medium in the surface layer, low in the subsurface layer, and medium in the subsoil. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The natural fertility and the organic matter content are low.

Lucy sand, 5 to 8 percent slopes – This gently sloping to sloping, well-drained soil is on side slopes and narrow ridges. Typically, the surface layer is very dark grayish brown sand about 11 inches thick. The subsurface layer, to a depth of about 24 inches, is strong brown loamy sand. The upper part of the subsoil, to a depth of about 34 inches, is yellowish red fine sandy loam. The lower part, to a depth of 80 inches or more, is sandy clay loam. This soil is moderately permeable, with a low available water capacity. The seasonal high water table is below 72 inches from the surface.

Lutterloh, limestone substratum-Moriah complex, 0 to 3 percent slopes - The Lutterloh series consists of somewhat poorly drained soils that formed in sandy and loamy sediments over limestone on the gulf coastal plain. Typically, the surface layer is dark grayish brown sand and is about 6 inches thick. The subsurface layer extends to about 50 inches. It is dark grayish brown sand to a depth of about 9 inches, and light brownish gray sand below that. The subsoil layer is light brownish gray sandy clay loam, and extends from 50 inches to about 70 inches. Soft limestone bedrock is at a depth of 70 inches. Slopes range from 0-5 percent. The Moriah series consists of moderately permeable soils over limestone on low uplands of the coastal plain. These soils are saturated between depths of 18 and 36 inches for 2 to 5 months. In a representative profile, the surface layer is gray fine sand 8 inches thick. The subsurface layer is fine sand 17 inches thick. It is yellowish brown in the upper part and white in the lower part. The subsoil is yellow fine sandy loam to 50 inches. Fractured limestone bedrock is at 50 inches. Slopes are 0 to 2 percent.

Lynn Haven fine sand, 0 to 2 percent slopes - This is a nearly level and gently sloping, very poorly drained sandy soil of the flats. Individual areas are from 3 to 75 acres and slopes are concave.

Typically, the surface layer is 13 inches thick. The upper 7 inches being black fine sand, the lower 6 inches being very dark gray very fine sand. The subsurface soil is mixed light gray and gray fine sand to 21 inches. Below this to 35 inches is black fine sand, to 48 inches is dark reddish brown fine sand, and to 62 inches is dark reddish brown fine sand. Underneath this to 80 inches is dark brown fine sand.

This extremely acid to strongly acid soil has moderate to moderately rapid permeability. The high water table is at or near the surface.

Mandarin fine sand, 0 to 2 percent slopes - This is a nearly level, somewhat poorly drained soil on narrow to broad ridges slightly higher than the adjacent flatwoods. Individual areas range in size from 3 to 100 acres. Slopes are smooth to convex.

Typically, the surface layer is dark gray fine sand about 4 inches thick. The subsurface layer is fine sand about 22 inches thick. The upper 4 inches is light brownish gray, and the lower 18 inches is light gray. The subsoil is fine sand that extends to a depth of 46 inches. Except for the lower 6 inches, it is weakly cemented and well coated with organic matter. The upper 4 inches is very dark grayish brown, the next 5 inches is very dark brown, the next 5 inches is black, and the lower 6 inches is brown. Below this, to a depth of 56 inches, is light gray fine sand. The next 6 inches is white fine sand, and the next 11 inches is grayish brown fine sand. Between depths of 73 and 80 inches is weakly cemented, black fine sand, and the sand grains are coated with organic matter.

Under natural conditions, this extremely to moderately acid soil has a water table at a depth of 18 to 42 inches and permeability is moderate. Natural fertility is low, and organic matter content is low to medium. Available water capacity is low.

Mandarin-Lutterloh limestone substratum complex - The Mandarin series consists of somewhat poorly-drained nearly level soils in landscapes slightly higher than the adjacent Flatwoods. Typically, these soils have gray fine sand surface and subsurface layers less than 30 inches thick over brown organic coated sandy layers, about 14 inches thick. Below this, to depths of 73 inches, are layers of gray or white loose fine sand underlain by a layer of black organic coated fine sand. Slopes range from 0 to 2 percent. The Lutterloh series consists of somewhat poorly drained soils that formed in sandy and loamy sediments over limestone on the gulf coastal plain. Typically, the surface layer is dark grayish brown sand and is about 6 inches thick. The subsurface layer extends to about 50 inches. It is dark grayish brown sand to a depth of about 9 inches, and light brownish gray sand below that. The subsoil layer is light brownish gray sandy clay loam, and extends from 50 inches to about 70 inches. Soft limestone bedrock is at a depth of 70 inches. Slopes range from 0-5 percent.

Mascotte fine sand, occasionally flooded - This is a poorly drained, nearly level soil on the floodplains of rivers and streams. This soil is flooded occasionally as a result of heavy and prolonged rains. A sharp rise in the water level causes the rivers and streams to overflow. The lowlands remain flooded for approximately 30 days and the depressions, which drain by percolation and seepage, for longer periods. This soil has been flooded in March or April in about 1 year out of every 10.

Typically, the surface layer is dark gray fine sand about 3 inches thick. It has many uncoated sand grains. The upper part of the subsoil is fine sand and extends to a depth of 34 inches. The upper 3 inches is dark brown, and most sand grains are coated with organic matter; the next 6 inches is brown, and most sand grains are coated with organic matter; and the lower 6 inches is brown with grayish brown sand pockets and brownish organic matter coated sand grains. A 4-inch-thick layer of fine sand separates the upper and lower parts of the subsoil. It is light brownish gray with brown mottles. The lower part of the subsoil extends to a depth of more than 80 inches. The upper 7 inches is light brownish gray fine sandy loam with light gray, very pale brown and reddish brown mottles; the next 14 inches is light gray sandy clay loam with reddish brown, gray, light yellowish brown and very pale brown mottles; and the next 21 inches is mottled gray, very pale brown, yellowish brown and strong brown sandy clay loam.

Included with this soil in mapping are small areas of Pelham, Plummer and Leon soils, and occasionally flooded Electra Variant soils. Also included are small areas of soils that are similar to the Mascotte soil but have a clayey subsoil with mica flakes and chunks of coral or that are in small depressions and are ponded for several months during rainy seasons. The included soils make up less than 25 percent of the map unit.

This Mascotte soil is ponded for up to 6 months in most years during the rainy season. At other times, the water table is within a depth of 15 inches for 6 to 8 months during most years. It recedes to a depth of more than 40 inches for very short periods during dry seasons. The available water capacity is very low to low in the surface and subsurface layers, moderately rapid in the upper part of the subsoil and slow in the lower part of the subsoil. The organic matter content is moderate, and natural fertility is low.

Matlacha, limestone substratum-Urban land complex - Matlacha, limestone substratum-Urban land complex consists of nearly level, somewhat poorly-drained Matlacha soil and areas of Urban land. Matlacha soil was formed by fill material from early earth-moving operations. Typically, Matlacha soil has a surface layer that is very dark, grayish-brown, gravelly, fine sand about six inches thick. The lower part, to a depth of about 23 inches, is mottled white, brown and yellow, fine sand mixed with 25 percent limestone fragments and scattered pockets of fine-textured clay material. Below the layers of fill material is original buried soil. The upper part of the buried soil, to a depth of about 44 inches, is a very dark grayish-brown and light gray sand. The next layer, to a depth of 48 inches, is light brownish-gray, fine, sandy loam. Below the fine sandy loam is a thin layer of soft limestone bedrock underlain by hard, white, fractured limestone bedrock.

Matlacha soil has a water table between depths of two and three feet for one month to three months annually. In many areas, the high water table and depth to bedrock are moderate to severe limitations to the use of these soils for most sanitary facilities and for building site development.

Meadowbrook sand, frequently flooded - This soil is nearly level and poorly drained. It is in drainageways. The mapped areas are elongated or irregular in shape and range from 50 to 500 acres. The slopes are nearly smooth and range from 0 to 2 percent.

Typically, this soil has a surface layer of very dark gray to black sand about 8 inches thick. The upper part of the subsurface layer, to a depth of about 16 inches is gray fine sand. The next layer, to a depth of 28 inches, is grayish brown fine sand. The lower part, to a depth of 43 inches, is gray fine sand. The subsoil to a depth of 80 inches or more is light gray or gray mottled sandy clay loam.

Included with this soil in mapping are Pamlico, Rutlege, and Surrency soils. These soils also are frequently flooded. Also included are a few areas of soils that have a subsurface layer that is stained organic matter. The included soils make up about 15 percent of the map unit.

This soil is frequently flooded for periods of long duration. The floodwater may be as much as 2 feet deep. The high water table is within 12 inches of the surface for most of the year except during long, extended dry periods. The available water capacity is low. The permeability is moderately low.

Micanopy loamy fine sand, 2 to 5 percent slopes – This is a gently sloping, somewhat poorly drained soil occurring on rolling uplands. Slopes are slightly convex. This soil has a perched water table about 20 to 30 inches below the surface for cumulative periods of 1 to 3 months during most years. During dry periods the water table is at a depth of more than 60 inches. Surface runoff is medium. Permeability is rapid in the surface layer, moderate in the upper 6 inches of the subsoil, and slow to very slow below this depth.

Typically, the surface layer is dark grayish brown loamy fine sand about 6 inches thick. The subsoil extends to a depth of 77 inches and consists of yellowish brown sandy clay loam and gray mottled sandy clay loam. The underlying material between a depth of 77 to 85 inches is intermixed gray and greenish gray sandy clay loam. Organic matter content in the surface layer ismoderately low to high.

Millhopper sand, 0 to 5 percent slopes - This nearly level to gently sloping, moderately well-drained soil is in small and large irregularly shaped areas on uplands and on slightly rolling knolls in the broad flatwoods. Slopes are mostly nearly smooth or convex. The areas range from about 10 to 250 acres in size.

Typically, the surface layer is dark grayish brown sand about nine inches thick. The subsurface layer is sand or fine sand about 49 inches thick. The upper 17 inches are yellowish brown, the next 22 inches are light yellowish brown, and the lower 10 inches are very pale brown. The subsoil extends to a depth of 89 inches. The upper six inches is yellowish brown loamy sand that has grayish and brownish mottles. The next 22 inches is light gray, mottled sandy clay loam, and the lower three inches is light gray, mottled sandy loam.

The water table is at a depth of 40 to 60 inches for one to four months and at a depth of 60 to 72 inches for two to four months during most years. The available water capacity is low in the surface and subsurface layers and is low to medium in the subsoil. Permeability is rapid in the surface and subsurface layers, moderately rapid in the upper six inches of the subsoil, and slow to moderately slow below this depth. Natural fertility is low. Organic matter content is low to moderately low.

Millhopper sand, 5 to 8 percent slopes - This sloping, moderately well drained soil is in small areas on narrow breaks and on long slopes of rolling uplands. These areas are mostly irregular or elongated and range from about 10 to 40 acres.

Typically, the surface layer is dark grayish brown sand about 7 inches thick. The subsurface layer is sand about 47 inches thick. The upper 37 inches is yellowish brown, and the lower 10 inches is pale brown. Mottles of brown and yellow range from none to common. The subsoil extends to a depth of 80 inches or more. The

upper 6 inches is yellowish brown sandy loam that has light gray and strong brown mottles, and the lower 22 inches is light gray sandy clay loam that has gray, strong brown, and very pale brown mottles.

Included with this soil in mapping are small areas of a soil which is similar to this Millhopper soil but which has loamy sand surface and subsurface layers. Small areas of Apopka, Arredondo, Gainesville, Kanapaha and Lochloosa soils are included. Small areas of Millhopper soils that have 0 to 5 percent slopes are also included. Total included areas are about 20 percent or less.

This Millhopper soil has a water table that is at a depth of 40 to 60 inches for 1 to 2 months and at a depth of 60 to 72 inches for 2 to 3 months during most years. The available water capacity is low in the surface and subsurface layers, and it is low to medium in the subsoil. Permeability is rapid in the surface and subsurface layers. It is moderate in the upper part of the subsoil and slow to moderately slow in the lower part. The natural soil fertility and the organic matter content are low.

Monteocha loamy sand - This nearly level, very poorly drained soil is in wet ponds and shallow depressional areas in the flatwoods. Slopes are less than 2 percent. It is in relatively small areas that range from about 8 to 35 acres.

Typically, the surface layer is black loamy sand about 12 inches thick. The subsurface layer is light brownish gray sand to a depth of 18 inches. The upper part of the subsoil is brown sand to a depth of 48 inches. Below this, a subsoil of fine sandy loam extends to a depth of 85 inches. The upper 11 inches is grayish brown, and the lower 26 inches is light brownish gray. Between 85 and 94 inches, the underlying material is light gray sand.

Included with this soil in mapping are small areas of Placid, Samsula, and Surrency soils. Included are soils that have characteristics which are similar to Monteocha soils but which have the dark brown subsoil layer below a depth of 30 inches. In the center of some mapped areas, there is a thin 1- to 5-inch covering of well-decomposed organic material on the surface. Total included areas are 20 percent or less.

This Monteocha soil has a water table that is within 10 inches of the surface for more than 6 months during most years. Most areas are covered with water for more than 4 months. Available water capacity is high to very high in the surface layer and medium in the subsurface layer and subsoil. Permeability is rapid in the surface layer, moderately rapid to rapid in the subsurface layer and upper part of the subsoil, and moderately slow to moderate in the lower part. Natural fertility is medium in the surface layer and low in the subsurface layer and subsoil. Organic matter content is high to very high in the surface layer.

Mulat sand - This nearly level, poorly drained soil is in broad areas of the flatwoods. Slopes are nearly smooth to slightly concave and range from 0 to 2 percent. The soil usually is in irregularly shaped small areas and ranges from about 15 to 60 acres.

Typically, the surface layer is sand about 8 inches thick. The upper 5 inches is very dark gray, and the lower 3 inches is dark gray. The subsurface layer is grayish brown to light gray sand to a depth of 26 inches. The subsoil extends to a depth of 54 inches and is gray. The upper 4 inches is loamy sand, the next 17 inches is fine sandy loam and the lower 7 inches is loamy sand. Between depths of 54 and 80 inches, the underlying material is light gray loamy sand.

Included with this soil in mapping are small areas of Pelham, Plummer, Pomona and Wauchula soils. Also included are a few small areas of soils which are similar to the Mulat soil but which have a loamy sand surface layer. Total included areas are about 20 percent or less.

This Mulat soil has a water table that is at a depth of 10 inches for 2 to 4 months and at a depth of 10 to 30 inches for about 2 to 4 months during most years. During drier seasons, the water table recedes to a depth of

more than 30 inches. Surface runoff is slow. The available water capacity is low to medium. Permeability is moderately rapidto- rapid in the surface and subsurface layers and slow to moderately slow in the subsoil. Permeability is moderately rapid-to-rapid in the underlying material. Natural fertility is low, and organic matter content of the surface layer ranges from moderate to moderately low.

Myakka fine sand - Nearly level and poorly drained, this soil is in broad, flatwoods areas. It also occurs as a narrow band around some slightly depressional, poorly drained soils. The slopes are smooth and less than 2 percent.

Typically, the surface layer is black fine sand 4 inches thick. The subsurface layer, to a depth of 27 inches, is dark gray and gray fine sand. The subsoil extends to a depth of 80 inches. It is black and dark reddish brown fine sand in the upper part and dark brown fine sand in the lower part.

Included with this soil (about 20 percent of the map unit) are small areas of Basinger, EauGallie, and Pompano soils. Also included are a few areas of soils that are similar to Myakka soil in the western part of the county that have limestone bedrock within 60 inches of the surface.

The water table is at a depth of less than 10 inches for 1 month to 4 months. It gradually recedes to a depth of 40 inches or more. Internal drainage is slow. Permeability is moderate or moderately rapid in the subsoil and low or very low in the other layers. Natural fertility is low.

Myakka, limestone substratum-lmmokalee complex - This map unit consists of a deep or very deep Myakka soil and a very deep lmmokalee soil. These poorly drained, nearly level soils are on flatwoods. Individual areas are generally irregular in shape and range from 2 to nearly 800 acres in size. Slopes range from O to 2 percent.

Myakka, limestone substratum-EauGallie, limestone substratum complex - This complex consists of nearly level, poorly drained Myakka and EauGallie soils. These soils are on the coastal flatwoods and are also on some islands adjacent to saltwater marshes in the northern part of Citrus county. The slopes are less than 2 percent.

Myakka soil, which comprises 40 percent of the map unit, typically has a surface layer that is dark gray fine sand about 5 inches thick. The subsurface layer, to a depth of 23 inches, is light brownish gray fine sand. The upper part of the subsoil, to a depth of 34 inches, is very dark gray fine sand. The lower part, to a depth of about 62 inches, is brown and light brownish gray fine sand. Below the subsoil is hard limestone bedrock.

EauGallie soil, which makes up 25 percent of the map unit, typically has a surface layer that is black fine sand about 4 inches thick. The subsurface layer, to a depth of 25 inches, is light brownish gray fine sand. The upper part of the subsoil, to a depth of 39 inches, is black fine sand. The middle part, to a depth of 59 inches, is grayish brown fine sand. The lower part, to a depth of 63 inches, is light olive gray sandy clay loam. Below the subsoil is hard limestone bedrock.

Included with these soils (about 35 percent of the map unit) are Immokalee soils, as well as some small depressional areas of Myakka, EauGallie, and Immokalee soils. Small areas of Basinger and Hallandale soils and rock outcrop are also included.

The soils in this complex have a high water table at a depth of less than 10 inches for 1 month to 4 months in most years. It gradually recedes to a depth of 40 inches or more during drier periods. Internal drainage is moderately slow. The available water capacity is medium in the subsoil and low to very low in the surface and subsurface layers. Natural fertility is low.

Myakka mucky sand, occasionally flooded- This unit consists of poorly drained, very deep Myakka soils. These nearly level, occasionally flooded soils are on areas of flatwoods that are adjacent to the tidal marsh or the Suwannee River flood plain. Typically, the surface layer is about 10 inches thick. It is black muck in the upper 2

inches, and very dark gray mucky sand below that. The subsurface layer is gray sand and extends to a depth of about 21 inches. The subsoil extends from a depth of 21 inches to beyond a depth of 80 inches. It is very dark gray sand in the upper 19 inches, and very dark grayish brown sand below that.

Myakka sand - This nearly level, poorly drained soil is in broad areas of the flatwoods. Slopes are nearly smooth to slightly convex and range from 0 to 2 percent. The areas are irregular or elongated in shape and range from about 10 to 100 acres.

Typically, the surface layer is dark grayish brown sand about 8 inches thick. The underlying layers are sand to a depth of 82 inches or more. In sequence from the top, the upper 16 inches is light gray, the next 6 inches is very dark brown and has sand grains well coated with organic materials; the next 5 inches is dark brown; the next 18 inches is very pale brown and has mottles; and the next 29 inches is light brownish gray.

Included with this soil are small areas of Pomona, Sparr and Pompano soils. Included are small areas of poorly drained soils that have a stained layer that does not meet the requirements of a spodic horizon. Also included are a few areas of soils that are similar to the Myakka soil except that they have a well-coated, organic-stained layer 14 to 19 inches below the surface. Total included areas are about 20 percent.

This Myakka soil has a water table that is at a depth of less than 10 inches for 1 to 4 months and at a depth of 10 to 40 inches for 2 to 4 months during most years. The water table recedes to a depth of more than 40 inches during drier seasons. Surface runoff is slow. The available water capacity is very low from 0 to 24 inches, medium to high from 24 to 30 inches, and very low to low below a depth of 30 inches. Permeability is rapid to a depth of about 24 inches, moderate to moderately rapid from 24 to 30 inches, and rapid below a depth of 30 inches. Natural fertility and organic matter content are low.

Newhan-Corolla rarely flooded, complex, gently undulating to hilly, 2 to 20 percent slopes - These are excessively to somewhat poorly drained soils of dunes. Slopes are convex or concave and individual areas range from 5 to 300 areas.

The Newhan Series typically consist of a 7 inch thick surface layer of white fine sand and to 80 inches is very pale brown fine sand.

This extremely acidic to mildly alkaline complex of soils was formed in thick marine deposits that may have been reworked by action of wind and waves. Soils here are affected by salt spray and have very rapid permeability.

Newhan-Corolla, rarely flooded, fine sands, rolling - These gently rolling to hilly, excessively drained, moderately well drained, and somewhat poorly drained soils are on narrow, dunelike ridges along the Atlantic coast. The Corolla soil is subject to flooding on rare occasions during prolonged, high-intensity storms. The mapped areas range from about 5 to 300 acres. Slopes are convex or concave and range from 2 to 20 percent.

In 100 percent of the areas mapped as Newhan-Corolla, rarely flooded, fine sands, rolling, Newhan and Corolla soils make up 98 to 100 percent of the map unit. Dissimilar soils make up 0 to 2 percent. They generally are in areas less than 3 acres in size.

Generally, the mapped areas are about 77 percent Newhan soils, 21 percent Corolla soils, and 2 percent dissimilar soils. The soils in this map unit are so intermingled that mapping them separately is not practical at the scale used. The proportions and patterns of the Newhan and Corolla soils, however, are relatively consistent in most areas.

The Newhan soil is excessively drained. It is at the higher elevations and has slopes that range from 5 to 20 percent. Typically, the surface layer is white fine sand about 8 inches thick. The underlying material, to a depth of about 80 inches, is very pale brown fine sand.

The Corolla soil is moderately well drained and somewhat poorly drained. It is in low positions on the landscape and has slopes of less than 6 percent. Typically, the surface layer is very pale brown fine sand about 6 inches thick. The underlying material, to a depth of about 80 inches, is fine sand. It is pale brown and light yellowish brown in the upper part and light gray in the lower part.

Included in this map unit are small areas of dissimilar soils. These are Fripp soils and Beaches. Fripp soils are in the western part of the areas.

The Newhan soil has a seasonal high water table at a depth of more than 72 inches during most years. The Corolla soil has a seasonal high water table at a dept of 18 to 36 inches for 2 to 6 months and at a depth of more than 36 inches for the rest of the year. The permeability of the Newhan and Corolla soils is very rapid. The available water capacity is very low. These soils are very low in natural fertility.

Newnan sand - This nearly level, somewhat poorly drained soil is in small to relatively large areas in the flatwoods. Slopes are nearly level to slightly convex and range from 0 to 2 percent. The areas generally range from about 10 to 250 acres.

Typically, the surface layer is dark gray sand about 5 inches thick. The subsurface layer is light brownish gray sand to a depth of 12 inches. The upper part of the subsoil is 4 inches of dark brown sand, in which the sand grains are well coated with organic material, and 4 inches of dark brown sand that is mottled. Below this is a leached layer of light gray to white sand to a depth of 56 inches. The lower part of the subsoil is loamy, light gray, and mottled. The upper 3 inches is loamy sand, the next 16 inches is fine sandy loam, and the lower 7 inches is sandy clay loam.

Included with this soil in some areas are Mulat, Pomona, Sparr, and Wauchula soils. In some areas are soils that have characteristics similar to Newnan soils except that they have a brown, organically stained layer directly below the surface layer or have only 1 to 3 inches of leached, light gray or white material between the surface layer and the stained layer. About 65 acres mapped as Newnan soil is within the flood plain of the Santa Fe River and is occasionally flooded. Total included areas are about 20 percent or less.

This Newnan soil has a water table that is at a depth of 18 to 30 inches for 1 to 2 months during most years and at a depth of 30 to 60 inches for 2 to 5 months. During drier periods, it is at a depth of more than 60 inches. The available water capacity is very low to low to a depth of about 12 inches and low to medium from 12 to 82 inches. Permeability is rapid to a depth of about 12 inches, moderately rapid to rapid from 12 to 16 inches, rapid from 16 to 56 inches, moderately rapid from 56 to 59 inches, and slow to moderately slow from 59 to 82 inches. Natural fertility is low in the sandy upper 56
inches and medium in the loamy subsoil below. Organic matter content is moderately low.

Norfolk loamy fine sand, 2 to 5 percent slopes – This is a gently sloping, well drained soil occurring on rolling uplands. The slopes are slightly convex. The water table is at a depth of 48 to 72 inches for 1 to 3 months during most years. Surface runoff is medium. Permeability is rapid in the surface layer, moderately slow to moderate in the upper part of the subsoil, and very slow to slow in the lower part.

The surface layer is dark grayish brown loamy fine sand about 9 inches thick. The subsoil extends to a depth of 62 inches and consists of yellowish brown fine sandy clay loam. The underlying material between 62 and 80 inches deep is light gray mottled clay. Organic matter content is low to moderately low.

Norfolk loamy fine sand, 5 to 8 percent slopes – This sloping, well drained soil is in irregularly shaped areas on small, sharp-breaking slopes and in irregularly shaped and elongated areas on the long hillsides of the rolling uplands. These areas range from about 8 to 35 acres.

Typically, the surface layer is dark grayish brown loamy sand about 6 inches thick. The subsurface later is light yellowish brown loamy sand about 5 inches thick. The subsoil extends to a depth of 75 inches or more. The upper 35 inches is yellowish brown sandy clay loam; the next 16 inches is yellowish brown, mottled sandy clay loam; and the lower 13 inches is mottled, yellowish brown and gray sandy clay.

Included with this soil in mapping are small areas of Kendrick, Lochloosa and Bivans soils. Also included are small areas of soils that have yellowish brown, clayey subsoil at a depth of less than 20 inches and have gray mottles within 30 inches of the surface. In a few small areas, the subsoil extends to a depth of less than 60 inches. Also included are small areas of soils that are similar to Norfolk soils but have more than 5 percent, by volume, nodules and fragments of ironstone. Limestone boulders and sinkholes are included in some areas. Total included areas are about 20 percent.

This Norfolk soil has a water table that is at a depth of 48 to 72 inches for 1 to 2 months during most years. Wetness is caused by hillside seepage. Surface runoff is rapid. The available moisture capacity is low in the sandy surface and subsurface layers and medium to high in the loamy and clayey subsoil. Permeability is rapid in the surface and subsurface layers. It is moderately slow in the upper part of the subsoil and very slow to slow in the lower part. Natural fertility is low in the sandy surface and subsurface layers and medium in the underlying subsoil. Organic matter content is low to moderately low.

Okeelanta-Lauderhill-Terra Ceia mucks - Okeelanta-Lauderhill-Terra Ceia mucks consist of nearly level, very poorly-drained, well-decomposed organic soils. These soils are in broad freshwater swamps that parallel the coast. Most of the area is less than five feet above sea level, and limestone bedrock is frequently within 80 inches of the surface layer. Mineral soils on small, slightly elevated islands are adjacent to these organic soils. Poorly defined, small ponds and streams are common during dry periods. Water covers most of the area during wet periods. A few freshwater springs are present.

The soils in this complex are ponded for six to twelve months. The water recedes to a depth of less than ten inches during extended periods of drought. Internal drainage is slow. Surface outlets are limited. Permeability is rapid in the organic layers and is very rapidly permeable in pedons that have sandy mineral layers. The available water capacity is very high in the organic layers and is low in the mineral layers. Natural fertility is high. Vegetation is limited to water-tolerant plants. With artificial drainage, these soils are subject to excessive oxidation resulting in subsidence and as such, have severe limitations with respect to development.

Okeelanta muck - This soil is nearly level and very poorly drained. It is in depressions and freshwater coastal swamps. It receives drainage from other soils and retains the water form long periods. The mapped areas are irregular in shape and range from about 5 to 150 acres. The slopes are less than 2 percent.

Typically, the surface layer is well decomposed, black muck about 8 inches thick. Below that layer, very dark gray muck extends to a depth of 35 inches, and very dark grayish muck extends to a depth of 38 inches. The underlying material to a depth of 80 inches or more is light grayish brown and light gray fine sand.

Included with this soil in mapping are small areas of depressional phases of Basinger, EauGallie, and Pompano soils and some small areas of Lauderhill and Terra Ceia soils. The included soils make up about 25 percent of the map unit.

This soil is ponded for 6 to 12 months. The water table recedes to a depth of less than 10 inches during dry periods. Internal drainage is slow. The organic material is exposed to oxidation by the removal of the water, and subsidence occurs. With continued artificial drainage for and extended period, only a small part of the

original organic surface layer may remain, and the mineral layer may be near the surface or exposed. Permeability is rapid. The organic material is height absorbent and has a very high available water capacity. The underlying sands have a low or very low available water capacity. Natural fertility is moderate.

Okeelanta-Terra Ceia association - This association consists of very poorly drained soils in regular and repeating patterns. The landscape is a broad, low swamp area which is interspersed with a few low ridges. The Okeelanta soils are around the edges of the mapping unit, where the organicmaterial is thinner. This association makes up a large part of Weekiwachee and Chassahowitzka swamps. Mapped areas are mostly long and very broad, and individual areas of each soil range from about 25 to 300 acres.

Okeelanta soils make up about 60 percent of this association. Typically, they have layers of black and very dark gray muck to a depth of about 27 inches. Below the muck is light gray fine sand.

Okeelanta soils have a water table at or near the surface except during extended dry periods. They have rapid permeability, very high available water capacity, very high organic matter content, and moderate natural fertility.

Terra Ceia soils make up as much as 30 percent of this association. Typically, Terra Ceia soils are black and dark grayish brown muck to a depth of 65 inches or more.

Terra Ceia soils have a water table on or above the surface except during extended dry periods. Runoff is slow. Internal drainage and permeability are rapid. These soils have very high available water capacity, very high organic matter content, and moderate natural fertility.

Minor soils make up about 10 percent of the association. Anclote soils are the most extensive of the minor soils. Also included are small areas of Myakka, Basinger Delray, and Tavares soils. These soils, with the exception of Delray soils, are on low ridges scattered throughout the association.

Oleno clay - This is a poorly drained, nearly level soil on the flood plains of rivers and creeks. The areas range from 20 to 600 acres and are elongated in shape. The concave slopes are less than 2 percent.

Typically, the surface layer and subsoil are alternating layers of dark gray and gray clay to a depth of 32 inches. Below that depth, in sequence, there is 10 inches of grayish brown fine sandy loam, 13 inches of gray fine sandy loam, 16 inches of dark gray fine sandy loam, and 6 inches of gray sandy clay loam. Below that, greenish gray clay extends to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Surrency and Plummer soils. Also included are small areas of soils that are similar to the Oleno soil but have limestone within a depth of 20 inches. The included soils make up about 20 percent of the map unit.

This Oleno soil has a water table at a depth of 6 to 18 inches for 6 to 8 months and at a depth below 18 inches during the remainder of the year. This soil is flooded by the river or creek for periods of up to a month in about 1 year in 10. The available water capacity is very high. Permeability is slow in the upper layers and moderate in the lower layers. Natural fertility and the organic matter content are moderate.

Orsino fine sand, 0 to 5 percent slopes – This soil is nearly level and moderately well drained. It is on knolls and ridges throughout the eastern part of the county. The slopes are 5 percent or less.

Typically, the surface layer is dark grayish brown fine sand about 5 inches thick. The subsurface layer, to a depth of 14 inches, is white fine sand. The subsoil, to a depth of 48 inches, is brownish yellow and very pale brown fine sand. The substratum to a depth of 80 inches is white fine sand.

Included with this soil are small areas of Basinger, Paola, Pamella, and Tavares soils.

The water table is between depths of 40 and 72 inches for 6 months. Permeability is rapid, and the available water capacity is very low. Natural fertility is low.

Orsino fine sand, 0 to 8 percent slopes - This unit consists of moderately well drained, very deep Orsino soils. These nearly level to gently rolling soils are on dunes and ridges. Typically, the surface layer is gray fine sand and extends to a depth of 4 inches. The subsurface layer is fine sand and extends to a depth of about 13 inches. It is very pale brown in the upper 4 inches and white below. The subsoil is fine sand and extends to a depth of about 70 inches. It is brownish yellow to a depth of about 48 inches, light yellowish brown to a depth of about 58 inches, and brownish yellow below that. The underlying material is white fine sand.

Ortega-Blanton complex, 0 to 5 percent slopes - The Ortega series consists of moderately well-drained, nearly level to sloping soil on sandy marine terraces. Typically, these soils have grayish brown fine sand surface layers, about 5 inches thick, underlain by layers of very pale fine sand to depths of about 48 inches and white fine sand between depths of 48 and 82 inches. White fine sand occurs at depths between 48 and 82 inches. Slopes range from 0-12 percent. The Blanton series consists of moderately well drained nearly level to strongly sloping soils in the coastal plain. In a representative profile, the surface layer is gray fine sand about 9 inches thick. The subsurface layer is between depths of 9 to 58 and is subdivided into layers of light yellowish-brown, very pale brown and white sand. The subsoil is between depths of 58 to 85 inches or more. It is pale brown sandy loam in the upper 4 inches, below this level; it is pale brown and light brownish gray sandy clay loam. Slopes are 0 to 20 percent.

Ortega Fine Sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and is moderately well drained. It is on slightly convex slopes on the broad flatwoods and along gentle slopes in the deep, sandy areas on the rolling uplands. The mapped areas generally are irregular in shape and range from 10 to 75 acres.

Typically, this soil has a surface layer of dark grayish brown fine sand about 3 inchesthick. The underlying material is fine sand. The upper part, to a depth of 18 inches, is very pale brown. The next layer, to a depth of 62 inches, is yellow with mottles. The lower part to a depth of 80 inches is white with mottles.

Included with this soil in mapping are small areas of Albany, Blanton, Centenary, Hurricane, Penney, and Ridgewood soils. The included soils make up about 15 percent or less of the map unit.

This soil has a high water table at a depth of 40 to 60 inches for cumulative periods of 6 to 8 months during most years. It is at a depth of more than 60 inches during droughty periods. The available water capacity is very low. The permeability is rapid.

Ortega Fine Sand, 5 to 8 percent slopes - This soil is moderately sloping and moderately well drained. It is in small area on sharp breaking slopes paralleling drainage ways and on long, narrow, irregular slopes on the broad uplands. The mapped areas range form about 5 to 90 acres. The slopes are slightly convex in most areas.

Typically, this soil has a surface layer of dark gray fine sand, about 5 inches thick. The underlying material is fine sand. The upper part, to a depth of 62 inches is very pale brown. The next layer, to a depth of 75 inches, is light brownish gray. The lower part to a depth of 80 inches is light gray.

Included in this soil in mapping are some small areas of Albany, Blanton, Centenary, Hurricane, Penney, and Ridgewood soils. The included soils make up about 15 percent or less of the map unit.

This soil has a high water table at a depth of 40 to 60 inches for cumulative periods of 6 to 8 months during most years. It is at a depth of more than 60 to inches during droughty periods. The available water capacity is very low. The permeability is rapid.

Osier Fine Sand - This soil is nearly level and poorly drained. It is on poorly defined flats on the broad flatwoods and in shallow depressions on the sandy, rolling uplands. The shape of the area is variable. The mapped areas range from 10 to 45 acres. On the broad flats, the slopes are nearly smooth; but in the shallow depressions, they generally are slightly concave. The slopes range from 0 to 2 percent.

Typically, this soil has a surface layer of very dark gray fine sand about 5 inches thick. The underlying material is fine sand. The upper part, to a depth of 16 inches, is dark grayish brown. The next layer, to a depth of 33 inches, is grayish brown with yellowish brown mottles. Below that layer, to a depth of 48 inches, the underlying material is light brownish gray with brownish yellow mottles. The next layer, to a depth of 62 inches, is gray with strong brown mottles. The lower part to a depth of 80 inches is dark grayish brown with gray mottles.

Included with this soil in mapping are small areas of Albany, Hurricane, Leon, Plummer, Ridgewood, and Rutlege soils. Also included are a few small areas of an Osier soil that is similar to this Osier fine sand, but it has 2 to 5 percent slopes. The included soils make up 15 percent or less of the map unit.

This soil has a high water table at a depth of less than 12 inches for 3 to 6 months during most years. The available water capacity is very low. The permeability is rapid.

Osier sand, occasionally flooded - This deep, poorly drained soil is in wet lowland positions on the floodplains of streams in the Southern Coastal Plain. Individual areas are irregular in shape. They range from about 10 to 40 acres. Slopes range from 0 to 2 percent.

The surface layer is very dark brown sand grading to dark grayish brown fine sand about 8 inches thick. The underlying layer is light brownish gray to light gray sand to 80 inches or more.

In 80 percent of areas mapped Osier sand, occasionally flooded, Osier and similar soils make up 79 to 99 percent of the map unit. Dissimilar soils make up 1 to 21 percent.

Included with this soil in mapping are Plummer and Pottsburg soils. Plummer soils have loamy layers below 40 inches of the surface. Pottsburg soils have dark colored stained horizons below 51 inches of the surface.

Otela-Candler complex, 1 to 5 percent slopes - This map unit consists of a moderately well drained Otela soil and an excessively drained Candler soil. These very deep, nearly level to gently sloping soils are on karst uplands. Individual areas are generally irregular in shape and range from 5 to more than 10,000 acres in size.

Typically, the surface layer of the Otela soil is dark grayish brown fine sand about 8 inches thick. The subsurface layer is fine sand. It is brown to a depth of about 21 inches, very pale brown to a depth of 32 inches, and white to a depth of 50 inches. Below this is a mixed subsurface layer and subsoil that is brownish yellow fine sandy loam to a depth of about 61 inches, brownish yellow sandy clay loam to a depth of 68 inches, and light gray sandy clay loam to a depth of 80 inches or more.

Typically, the surface layer of the Candler soil is grayish brown fine sand about 7 inches thick. The subsurface layer is grayish brown fine sand to a depth of about 14 inches, pale brown fine sand to a depth of 30 inches, and very pale brown fine sand to a depth of 75 inches. Below this to a depth of 80 inches or more is a mixed subsurface layer and subsoil of white fine sand that has common thin, horizontal lenses of yellowish brown loamy fine sand.

Generally, the mapped areas average about 56 percent Otela and similar soils and 33 percent Candler and similar soils. The components of this map unit are so intermingled that it is not practical to map them

separately at the scale used in mapping. However, the proportions of the Otela and Candler soils and the similar soils are fairly consistent in most mapped areas.

Included in mapping are soils that are similar to the Otela soil but have a dark surface layer that is more than 10 inches thick, have bedrock at a depth of 50 to 60 inches, have a seasonal high water table at a depth of 20 to 42 inches, or do not have a seasonal high water table within a depth of 72 inches. Also included are soils that are similar to the Candler soil but have more than 5 percent silt and clay between depths of 10and 40 inches, have a dark surface layer that is more than 8 inches thick, do not have sandy or loamy lenses within a depth of 80 inches, or have a seasonal high water table at a depth of 40 to 72 inches.

Dissimilar soils that are included with the Otela and Candler soils in mapping occur as small areas of Adamsville, Bonneau, Bushnell, Hague, Jonesville, Moriah, Placid, Popash, and Shadeville soils. Bonneau, Hague, Jonesville, and Shadeville soils are in positions on the landscape similar to those of the Otela and Candler soils. Adamsville, Bushnell, and Moriah soils are in the lower landscape positions. Placid and Popash soils are in depressions. Bonneau, Hague, Jonesville, and Shadeville soils have a loamy subsoil within a depth of 40 inches. Jonesville soils have a limestone bedrock within a depth of 40 inches.

In most years the seasonal high water table is perched at a depth of 48 to 72 inches in the Otela soil for 1 to 4 months. It is below a depth of 72 inches in the Candler soil throughout the year. Permeability is slow or moderately slow in the Otela soil and rapid in the Candler soil. Available water capacity is low in the Otela soil and very low in the Candler soil.

Otela limestone substratum-Chiefland-Kureb complex, 0 to 5 percent slopes - The Otela series consists of deep moderately well drained, moderately slowly permeable soils on nearly level to gently undulating topography. Typically, the surface layer is light brownish gray sand about 4 inches thick. The subsurface layers are sand and extend to a depth of about 50 inches. They are pale brown, light gray and white with yellow mottles in the lower part. The subsoil layers are mottled brownish yellow and yellowish brown sandy loam and sandy clay loam to 63 inches. Fractured porous limestone bedrock is at 63 inches. Slopes range from 0 to 5 percent. The Chiefland series consists of moderately deep well drained soils on smooth to undulating uplands. Typically, the surface layer is brown fine sand about 8 inches thick. The subsurface layer is pale brown fine sand about 25 inches thick. The subsoil layer is strong brown find sandy loam with few limestone nodules to a depth of 39 inches. Below this is white limestone to depths of 80 inches or more. Slopes are 0 to 8 percent. The Kureb series consists of excessively drained soils on broad undulating ridges and short side slopes of the lower coastal plain. In a representative profile, the surface layer is dark gray sand, 3 inches thick. The subsurface layer is light gray sand, 23 inches thick. The next layer to 51 inches is brownish yellow, dark brown and light gray sand. The underlying layer to a depth of 89 inches is pale brown sand. Slopes range from 0 to 20 percent.

Otela-Penney fine sands, 0 to 5 percent slopes - These nearly level and gently sloping soils are on uplands. The Otela soil is moderately well drained, and the Penney soil is excessively drained. Individual areas are irregular in shape and range from 15 to more than 500 acres in size. Slopes are nearly smooth or convex. Typically, the surface layer of the Otela soil is dark grayish brown fine sand about 8 inches thick. The fine sand subsurface layer extends to a depth of about 60 inches. The upper 24 inches is light yellowish brown, and the lower 36 inches is very pale brown. The subsoil to a depth of about 80 inches is sandy clay loam. The upper 11 inches is light yellowish brown, and the lower 9 inches is light gray and has a few fine limestone pebbles.

Otela-Tavares complex, 1 to 5 percent slopes – This unit consists of moderately well drained, very deep Otela and Tavares soils. These nearly level to gently sloping soils are on karst uplands. Typically, the surface layer of the Otela soil is dark gray fine sand, and is about eight inches thick. The subsurface layer extends to a depth of about 68 inches. It is grayish brown fine sand to a depth of about 18 inches, light brownish gray fine sand to a depth of about 30 inches, very pale brown fine sand to a depth of about 35 inches, white fine sand to a depth of about 41 inches, and very pale brown fine sand below that. The subsoil layer extends from a depth of 68

inches to beyond a depth of 80 inches. It is light yellowish brown fine sandy loam in the upper 10 inches, and gray fine sandy loam below that. Typically, the surface layer of the Tavares soil is dark grayish brown fine sand, and is about nine inches thick. The underlying material is fine sand and extends to beyond a depth of 80 inches. It is grayish brown to a depth of about 18 inches, pale brown to a depth of about 38 inches, very pale brown to a depth of about 48 inches, and white below that.

Ousley-Albany complex, occasionally flooded – This unit consists of somewhat poorly drained, very deep Ousley and Albany soils. These nearly level, occasionally flooded soils are on slightly elevated knolls and ridges on flood plains. Typically, the surface layer of the Ousley soil extends to a depth of about 12 inches. It is gray fine sand in the upper four inches, and light gray fine sand below that. The underlying material is fine sand and extends to beyond a depth of 80 inches. It is dark brown to a depth of about 18 inches, yellowish brown to a depth of about 28 inches, light yellowish brown to a depth of about 38 inches, pale brown to a depth of about 65 inches, and light gray below that. Typically, the surface layer of the Albany soil is light brownish gray fine sand and extends to a depth of about six inches. The subsurface layer is brown fine sand to a depth of about 15 inches, and light yellowish brown fine sand to a depth of about 50 inches. The subsoil layer extends from a depth of 50 inches, to beyond a depth of 80 inches. It is yellowish brown sandy clay loam in the upper 15 inches, and light gray sandy clay loam below.

Pamlico muck, depressional, 0 to 1 percent slopes - This is a nearly level, very poorly drained organic soil in tributaries of major streams, in depressions, and in drainageways. Individual areas range in size from 3 to 100 acres. Slopes are smooth to concave.

Typically, the surface layer is 2 inches of decomposed organic matter. To 6 inches is black muck. Below this to 30 inches is very dusky red muck and to 35 inches is dark brown muck. The next layers are very dark grayish brown fine sand to 60 inches thick and dark brown fine sand that extends to a depth of 80 inches or more.

Under natural conditions, this extremely acid to strongly acid soil has a water table at or near the surface. Permeability is moderate. Natural fertility is moderate and organic matter content is very high. Available water capacity is high.

Pedro-Jonesville Complex, 0 to 5 percent slopes - This complex consists of small areas of nearly level to gently sloping, well-drained Pedro and Jonesville soils that are so intermixed that they cannot be separated at the scale of the mapping. Slopes are smooth to slightly convex. Mapped areas of this complex are irregular in shape and range from about 10 to 50 acres. These soils are intermixed across the landscape. Individual areas of each soil range from about 1/10 of an acre to 3 acres.

Pedro fine sand makes up about 40 to 55 percent of each mapped area. Typically, the soil has a dark gray fine sand surface layer about 5 inches thick. The subsurface layer is light yellowish brown sand about 7 inches thick. The subsoil is strong brown sandy clay loam about 5 inches thick. The underlying material to a depth of 72 inches or more is white, partially decomposed limestone soft enough to be dug with light power equipment, such as a backhoe.

In the Pedro soil, the available water capacity is low in the sandy surface and subsurface layers and medium in the thin, loamy subsoil. Permeability is rapid in the sandy surface and subsurface layers and moderately rapid in the loamy subsoil. Organic matter content is low, and natural fertility is low to medium. Surface runoff is slow. The water table is below a depth of 72 inches.

Jonesville sand makes up about 35 to 45 percent of each mapped area. Typically, the surface layer is dark gray sand bout 7 inches thick. The subsurface layer is pale brown sand to a depth of 29 inches. The subsoil extends to a depth of 33 inches. It is brownish yellow sandy clay loam. Below this is limestone to a depth of 80 inches or more. This limestone is partially weathered and soft enough to be dug with light power equipment.

In the Jonesville soil, the available water capacity is low in the surface layer and very low to low in the subsurface layer. It is low in the subsoil. Permeability is rapid in the surface and subsurface layers and moderately slow in the subsoil. Organic matter content is moderately low. Natural fertility is low to medium. Surface runoff is slow. The water table is more than 72 inches below the surface.

Included with these soils in mapping are soils that have pedon characteristics similar to the Cadillac soils. Also included in some areas are soil that have sandy surface and subsurface layers less than 20 inches thick, a yellowish brown or strong brown sandy clay subsoil, and soft limestone at a depth of 20 to 50 inches. Included in a few areas are included soils that are sandy to a depth of less than 20 inches and have a loamy or clayey, yellowish brown subsoil that has gray mottles at a depth of 25 to 40 inches. These included soils are strongly acid to slightly acid in the surface layer and strongly acid to mildly alkaline in the subsoil. Limestone boulders and sinkholes are common in areas of this complex. About 12 acres mapped as this complex is within the flood plain of the Santa Fe River and is occasionally flooded. Included areas make up 5 to 25 percent of each mapped area.

Pelham fine sand - This poorly drained, nearly level soil is on broad, low flats in the flatwoods. Slopes are nearly smooth to concave and range from 0 to 2 percent.

Typically, the surface layer is black and very dark gray fine sand about 6 inches thick. The subsurface layer, to a depth of about 26 inches, is light brownish gray fine sand. The subsoil to a depth of 80 inches or more is gray fine sandy loam and sandy clay loam.

Permeability is moderate or moderately slow in the Pelham soil. Available water capacity is low. In most years the seasonal high water table commonly is at a depth of 6 to 12 inches. In the lower areas, the water table is within a depth of 6 inches.

Pelham fine sand occasionally flooded - Deep poorly drained soil is in wet lowland positions on the floodplains of streams of the Southern Coastal Plain. Individual areas are irregular in shape. They range from about 10 to 40 acres. Slopes range from 0 to 2 percent.

The surface layer is very dark gray fine sand about 7 inches thick. The subsurface layer is dark gray grading to grayish brown fine sand to a depth of 25 inches. The subsoil layer is grayish brown sandy loam grading to gray and dark gray sandy clay loam to 80 inches or more.

In 80 percent of areas mapped Pelham sand occasionally flooded, Pelham and similar soils make up 79 to 99 percent of the map unit. Dissimilar soils make up 1 to 21 percent.

Included with this soil in mapping are Albany and Stockade soils. Albany soils are on slightly higher positions in the landscape and are better drained. Stockade soils have loamy surface and subsurface horizons.

Pelham sand - This nearly level, poorly drained soil is in small and large areas in the flatwoods. Slopes are nearly smooth and range from zero to two percent. The areas are irregular in shape and range from 10 to 50 acres.

Typically, the surface layer is sand about seven inches thick. The upper four inches is very dark gray, and the lower three inches is dark gray. The subsurface layer is sand about 22 inches thick. The upper seven inches is light brownish gray and has gray mottles, and the lower 15 inches is gray. The subsoil extends to a depth of 69 inches. The upper three inches is gray sandy loam, and the lower 37 inches is gray, mottled sandy clay loam. Between depths of 69 and 80 inches, the underlying material is gray, mottled sandy loam.

The water table is less than 10 inches below the surface for one to four months during most years. The water table recedes below a depth of 40 inches during dry seasons. Surface runoff is slow. The available water

capacity is low in the surface and subsurface layers and medium in the loamy subsoil. Permeability is rapid in the surface and subsurface layers and moderate in the loamy subsoil. Natural fertility is low in the upper 29 inches and medium below 29 inches. The organic matter is moderately low.

Penney Fine Sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and is excessively drained. It is on the deep, sandy uplands. The mapped areas are irregular in shape and range from 15 to 300 acres. The slopes are nearly smooth to convex.

Typically, this soil has a surface layer of gray fine sand about 3 inches thick. The underlying material is fine sand. The upper part, to a depth of 17 inches, is brownish yellow. The next layer, to a depth of 45 inches is yellow. Below that layer, to a depth of 57 inches the underlying material is very pale brown. The lower part to a depth of 80 inches is very pale brown and has thin lamellae of yellowish brown loamy fine sand.

Included with this soil in mapping are some small areas of Albany, Blanton, Centenary, and Ortega soils. In a few places are small areas of Penney soils that have slope of 5 to 8 percent. The included soils make up about 15 percent or less of the map unit.

This soil has a water table at a depth of more than 72 inches. The available water capacity is very low. The permeability is rapid.

Penney fine sand, 5 to 8 percent slopes - This soil is moderately sloping and excessively drained. It is in small areas on sharp breaking slopes paralleling drainageways and in relatively large areas on long, narrow slopes on the broad uplands. The mapped areas range from about 5 to 100 acres. The slopes are slightly convex in most areas.

Typically, this soil has a surface layer of gray fine sand about 3 inches thick. The underlying material is fine sand. The upper part, to a depth of 57 inches, is very pale brown. The lower part to a depth of 80 inches is very pale brown with thin lamellae of yellowish brown loamy fine sand.

Included with this soil in mapping are some small areas of Albany, Blanton, Centenary, and Ortega soils. The included soils make up about 15 percent or less of the map unit.

This soil has a water table at a depth of more than 72 inches. The available water capacity is very low. The permeability is rapid.

Penney sand, 0 to 5 percent slope - This nearly level and gently sloping, excessively drained soil sits on broad ridges and on isolated knolls. The major soil component contains 90 percent Penney soils. The typical soil profile has a surface layer of sand to a depth of 55 inches and fine sand extends to a depth of about 55 to 80 inches. The parent material contains Eolian or sandy marine deposits. Permeability of this soil is rapid with no flooding or ponding. The available water capacity is very low (about 2.7 inches). The depth to the water table is about 72 to 84 inches. The minor soil components include 5 percent Blanton and 5 percent Ortega.

Penney-Wadley complex, 0 to 5 percent slopes: The Penney series consists of excessively drained soils in the deep sandy uplands. Typically, the surface layer is gray fine sand about three inches thick. The underlying layers are fine sand and extend to a depth of 80 inches or more. The upper 14 inches is brownish yellow and the next 28 inches is yellow. The lower 35 inches is very pale brown and contains thin yellowish brown loamy fine sand lamellae below 57 inches. Slopes range from 0 to 25 percent. The Wadley series consists of very deep, well drained or somewhat excessively moderately permeable soils that are formed in sandy and loamy marine sediments. They are on sandy uplands of the lower coastal plain. Typically, the surface layer is light brownish gray fine sand and is about 2 inches thick. The subsurface is fine sand and extends to 72 inches. It is very pale brown to a depth of 54 inches, and light gray to a depth of 72 inches with thin horizontal yellowish

brown lamellae. The subsoil layer is yellowish brown fine sandy loam to beyond to beyond a depth of 80 inches. Slopes range from 0 to 40 percent.

Pickney sand, frequently flooded - This nearly level, very poorly drained soil is on flood plains on marine terraces. The parent material is sandy marine deposits and/or fluviomarine deposits. A typical profile consists of dark sand on the surface, down to a depth of 34 inches. Underlying layers (34 to 80 inches) are fine sand. Pickney and similar soils comprise 75 percent of the map unit, while the minor component, Pompano soil, comprises 25 percent.

In frequently flooded Pickney sand, the water table is right at the surface. Surface runoff is slow. The available water capacity is low. Permeability is very rapid. The natural fertility is low.

Pineda fine sand - This poorly drained, very deep nearly level soil is on sloughs on flatwoods. Individual areas are generally irregular in shape and range from 3 to nearly 350 acres in size. Slopes range from 0 to 2 percent.

Typically, the surface layer is very dark gray fine sand about 4 inches thick. The subsurface layer is dark gray fine sand to a depth of about 18 inches. The subsoil is brown fine sand to a depth of about 32 inches, dark grayish brown fine sandy loam to a depth of 55 inches, and greenish gray sandy clay loam to a depth of 80 inches or more.

On 80 percent of the acreage mapped as Pineda fine sand, Pineda and similar soils make up about 76 to 86 percent of the mapped areas. Dissimilar soils make up about 14 to 24 percent. On 20 percent of the acreage, the dissimilar soils make up more than 24 percent of the mapped areas.

Included in mapping are soils that are similar to the Pineda soils but have and organically coated subsoil more than 2 inches thick that overlies the loamy subsoil, do not have a sandy subsoil, have bedrock at a depth of 60 to 80 inches, do not have sandy intrusions in the upper 2 to 10 inches of the loamy subsoil, or have a dark surface layer that is more than 10 inches thick.

In most years the seasonal high water table is within a depth of 12 inches in the Pineda soil for 2 to 6 months, but it can be above the surface for 1 to 2 weeks following heavy rains or can recede to a depth of about 60 inches during droughty periods. Permeability is slow or very slow. Available water capacity is low.

Pits – This map unit consists of irregularly-shaped, open pits from which the soil and other materials have been mined or excavated. The mined material was mainly limestone and phosphate, but in some areas, sand and other soil material were removed. These excavations are 5 to 50 feet below the surrounding natural ground level. The walls are strongly sloping to nearly vertical and consist of exposed layers of sand and other soil material and, frequently, bedrock.

In most areas, the bottoms of the pits consist of a highly variable mixture of smooth to strongly sloping sand and geologic materials. These materials may contain scattered limestone boulders or limestone bedrock, or both. In areas where the pits have been excavated to near ground water level, they retain water for variable periods and have a seasonal high water table. Some pits are permanent bodies of water and, if large enough, are shown on the soil maps as water. In these areas, fish and other wildlife have become established. Other pits have exposed bedrock.

Pits and Dumps - This map unit consists of pits from which limestone has been or is being removed during surface mining operations and dumps where the excavated overburden material has been piled adjacent to the pits. Individual areas of pits and dumps are usually impractical to separate at the scale in which they are mapped.

The pits vary from about 5 to 75 acres in size and about 30 to 70 feet in depth. They are quite variable in age, ranging from pits that are currently being mined to old abandoned ones that are approximately 65 to 75 years old.

The dumps mostly consist of large areas of heterogeneous soil material that has been excavated from the surface of the limestone and piled adjacent to the pits. This mixed soil material commonly is about 1 to 15 percent, by volume, fragments and boulders of limestone, which are intermixed with the soil material. This material is in relatively narrow piles, which are about 6 to 30 feet high and are around the perimeter of the pits.

Included with this map unit are some pits in which the soil has been excavated for use in road construction and for fill material on sites for buildings. These pits, locally known as borrow pits, are about 4 to 20 acres in size and about 5 to 10 feet in depth. Small piles of limestone that has been excavated and stored on the floor of some of the pits for future use are also included.

Placid sand, depressional - This nearly level, very poorly drained soil is along poorly defined drainageways and in wet depressional areas both in the flatwoods and on sandy ridges. Slopes range from 0 to 2 percent. The areas are circular, elongated or irregularly shaped and are about 10 to 50 acres.

Typically, the surface layer is sand about 15 inches thick. The upper 8 inches is black, and the lower 7 inches is very dark gray. The underlying layers are sand to a depth of more than 82 inches. The upper 6 inches is grayish brown, the next 26 inches is light brownish gray and the lower 35 inches is light gray.

Included in some areas are small areas of Pompano and Samsula soils. Total included areas are less than 15 percent.

This Placid soil has a water table that is within 10 inches of the surface for 6 to 12 months of the year. The surface is usually covered with water for 6 months or more. The available water capacity is high to a depth of about 15 inches and low below this depth. Permeability is rapid throughout. Internal drainage is slow because it is impeded by the water table. Natural fertility and organic matter content are high to a depth of about 15 inches and very low below this depth.

Placid and Popash soils, depressional – This unit consists of very poorly drained, very deep Placid and Popash soils. These nearly level, ponded soils are on depressions that are within areas of flatwoods or on marsh prairies. Typically, the surface layer of the Placid soil is black fine sand, and is about 22 inches thick. The underlying material extends beyond a depth of 80 inches. It is dark gray fine sand in the upper 16 inches, and light brownish gray fine sand below that. Typically, the surface layer of the Popash soil is very dark gray fine sand, and is about 12 inches thick. The subsurface layer extends to a depth of about 45 inches. It is a mixture of dark grayish brown and grayish brown fine sand to a depth of about 20 inches, grayish brown fine sand to a depth of about 30 inches, and light brownish gray fine sand below that. The subsoil extends from a depth of about 45 inches to beyond 80 inches. It is dark gray sandy clay loam.

Placid and Samsula soils, depressional - This unit consists of very poorly drained, very deep Placid and Samsula soils. These nearly level, ponded soils are on depressions. Typically, the surface layer of the Placid soil extends to a depth of about 14 inches. It is black muck in the upper 3 inches, and very dark gray fine sand below. The underlying material extends beyond a depth of 80 inches. It is light gray fine sand to a depth of about 24 inches, brown fine sand to a depth of about 45 inches, and very pale brown fine sand below that. Typically, the surface layer of the Samsula soil extends to a depth of about 80 inches. It is dark brown muck in the upper 6 inches, and black muck below that to a depth of 47 inches. The underlying material extends beyond a depth of 80 inches. It is grayish brown fine sand in the upper 15 inches, and light brownish gray fine sand below that.

Plummer fine sand - This nearly level, poorly drained soil is in the broad areas of the flatwoods. Slopes are nearly smooth and range from 0 to 2 percent. Areas are relatively small and irregular in shape and are about 10 to 50 acres.

Typically, the surface layer is black fine sand about 6 inches thick. The subsurface layer is fine sand to a depth of 42 inches. The upper 8 inches is light brownish gray, the next 18 inches is gray and the lower 10 inches is light gray. The subsoil extends to a depth of 81 inches or more. The upper 8 inches is light gray, mottled very fine sandy loam, and the lower 31 inches is light gray sandy clay loam.

Included with this soil in mapping are small areas of Mulat, Pomona, Pompano and Sparr soils. Also included are a few areas in which the surface and subsurface layers are sand. About 15 acres mapped, as this soil along the Santa Fe River is occasionally flooded. Total included areas in any one delineation are about 15 percent.

This Plummer soil has a water table that is at a depth of less than 10 inches for 1 to 3 months and is at a depth of 10 to 40 inches for about 3 to 4 months during most years. It recedes to more than 40 inches during drier seasons. The available water capacity is medium to high in the surface and subsurface layers and low to medium in the subsoil. Permeability is moderately rapid-to-rapid in the surface and subsurface layers and moderate in the subsoil. Natural fertility is low. Organic matter content is moderately low.

Plummer fine sand, depressional - This is a nearly level, poorly drained soil in depressions. The areas range from 5 to 80 acres and are circular or irregularly shaped. The slope is less than 2 percent.

Typically, the surface layer is gray fine sand about 5 inches thick. The subsurface layer is gray fine sand and extends to a depth of 75 inches. It is gray sandy clay loam with yellow, strong brown and very pale brown mottles. The substratum is white fine sand and extends to a depth of more than 80 inches.

Included with this soil in mapping are small areas of Surrency and Pelham soils. Also included are soils that are similar to the Plummer soil, but some have a clayey subsoil, some have phosphatic pebbles and iron concretions, and other have weakly cemented organic-stained layers in the subsurface layer. The included soils make up less than 15 percent of the map unit.

This Plummer soil has a water table at or above the surface layer for 4 to 6 months during most years. It is within a depth of 15 inches for 6 to 8 months during most years. It recedes to a depth of more than 40 inches during dry periods. The available water capacity is low in the surface and subsurface layers and medium in the subsoil. Permeability is rapid in the surface and subsurface layers and moderately slow in the subsoil. Natural fertility is low.

Plummer fine sand, occasionally flooded - This is a poorly drained, nearly level soil on the flood plains of rivers and streams. This soil is flooded occasionally after heavy and prolonged rains. A sharp rise in the water level causes the rivers and streams to overflow. The lowlands remain flooded for approximately 30 days and the depressions, which drain by percolation and seepage, for longer periods. This soil has been flooded in March or April in about 1 year out of 10. The slope is less than 2 percent.

Typically, the surface layer is dark gray fine sand about 4 inches thick. The subsurface is light gray fine sand to a depth of 55 inches. The subsoil is gray sandy clay loam and has pockets of sandy clay. This layer extends to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Mascotte, Pelham, and Electra Variant soils. Also included are small areas of soils that are similar to the Plummer soil, but some do not have a loamy subsoil, some have a clay subsoil, some have slopes ranging up to 12 percent, and some have ironstone fragments in the profile. The included soils make up about 25 percent of the map unit.

This Plummer soil has a water table within a depth of 15 inches for 6 to 8 months during most years. The water table recedes to a depth of more than 40 inches during very dry periods. The available water capacity is low in the surface and subsurface layers and medium in the subsoil. Permeability is rapid in the surface and subsurface layers and moderately slow in the subsoil. Natural fertility and organic matter content are low.

Plummer muck, depressional - This is a nearly level, poorly drained soil in concave depressions and poorly defined drainageways. The areas range from 5 to 300 acres and are irregular in shape. The slope is less than 2 percent. This soil is similar to the Plummer fine sand soils in all characteristics, except that the dark colored surface layer is thicker than typical. This difference does not affect use and behavior of this soil.

Typically, the surface layer is covered with about 8 inches of partially decayed sphagnum moss and muck. This layer has many roots, leaves and twigs. The muck is about 60 percent fiber. The mineral surface layer is black fine about 5 inches thick. The subsurface layer is fine sand and extends to a depth of 55 inches. The upper 7 inches is light brownish gray. The next 43 inches is dark grayish brown. The subsoil is light brownish gray fine sandy loam and extends to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Surrency, Pamlico and Pelham soils. Also included are soils that are similar to the Plummer soil, but some have a sandy texture to a depth of 80 inches or more or have an organic-stained subsurface layer. The included soils make up about 25 percent of the map unit.

This soil has within a depth of 15 inches for 6 to 8 months during most years. The water table is ponded during spring and summer. The available water capacity is high in the surface layer, low in the subsurface layer, and medium in the subsoil. Permeability is moderately rapid to rapid in the surface and subsurface layers and moderately slow in the subsoil. Natural fertility is moderate.

Pomello fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and moderately well drained. It is on low ridges and knolls on the flatwoods and also occurs in areas adjacent to some streams and water areas. The mapped areas are mainly oval to oblong and range from 5 to 20 acres.

Typically, the surface layer is dark gray and light brownish gray fine sand 5 inches thick. The subsurface layer, to a depth of 31 inches, is white fine sand. The upper part of the subsoil, to a depth of 52 inches, is black and dark brown fine sand. The lower part to a depth of 80 inches is brown fine sand.

Included with this soil in mapping are small areas of Basinger, EauGallie Immokalee, Myakka Orsino, and Paola soils. Also included are small areas of soils that have limestone cobbles and boulders at a depth of more than 60 inches. These buried rocks and boulders are mainly in areas adjacent to soils that are underlain by bedrock within 80 inches of the surface layer or adjacent to rock outcrop areas. The included soils make up less than 20 percent of the map unit.

The water table is at a depth of 2 to 3.5 feet for 1 month to 4 months and between depths of 3.5 and 5 feet for 8 months. Permeability is very rapid in the surface and subsurface layers. It is moderate in the upper part of the subsoil and moderately rapid in the lower part. The available water capacity is moderate in the subsoil and very low in the other layers. Reaction ranges from very strongly acid, to medium acid. Natural fertility is very low. The soil rapidly becomes droughty as the water table is lowered.

Pomona sand - This nearly level, poorly drained soil is in small and large areas in the flatwoods. Slopes are nearly smooth and range from 0 to 2 percent. The areas are irregular in shape and range from about 10 to 350 acres.

Typically, the surface layer is very dark gray sand about 5 inches thick. The subsurface layer is sand to a depth of 16 inches. The upper 4 inches is gray, and the lower 7 inches is light gray. The upper 4 inches of the subsoil is very dark gray sand in which many sand grains are coated with organic material, and the next 4 inches is dark

reddish brown sand. The next 8 inches is pale brown sand that has mottles, and the lower 11 inches is very pale brown sand. Below this, a loamy subsoil extends to a depth of 69 inches. The upper 4 inches is light gray fine sandy loam, and the lower 22 inches is gray, mottled sandy clay loam. Between depths of 69 and 84 inches, the underlying material is light gray, mottled fine sandy loam.

Included with this soil in mapping are small areas of soils which are similar to Pomona soils but which have a brown, organically stained layer. Many of the sand grains are uncoated. Also included are small areas of soils which are similar to this Pomona soil but which have weakly cemented layers at a depth of 30 to 50 inches. Small areas of Myakka, Newnan, Pelham, Sparr, and Wauchula soils are in some areas. About 60 acres mapped as Pomona soil along the Santa Fe River is occasionally flooded. Total included areas are about 20 percent.

In this Pomona soil, the water table is within 10 inches of the surface for 1 to 3 months during most years. During dry seasons, the water table recedes to a depth of more than 40 inches. Surface runoff is slow. The available water capacity is low to medium in the surface and subsurface layers, and it ranges from low to high in the subsoil. Permeability is rapid to very rapid in the surface and subsurface layers, moderate to rapid in the upper part of the subsoil, and moderately slow to moderate in the lower part.

Pomona sand, depressional - This nearly level, very poorly drained soil is in shallow depressional areas and along narrow drainageways in the flatwoods. Slopes are nearly smooth or slightly concave and range from 0 to 2 percent. These areas are relatively small and irregularly shaped or elongated. They range from about 10 to 35 acres.

Typically, the surface layer is very dark gray sand about 4 inches thick. The subsurface layer is light gray sand to a depth of 25 inches. The upper part of the subsoil is dark brown sand to a depth of 32 inches; many of the sand grains are coated with organic material. The next layer is grayish brown sand to a depth of 52 inches. Below this, the lower part of the subsoil is gray sandy loam to a depth of 73 inches. Between depths of 73 and 80 inches, the underlying material is gray sandy loam and loamy sand.

Included with this soil in mapping are small areas of Monteocha, Plummer, Pompano and Surrency soils. Total included areas are about 15 percent.

In this Pomona soil, the water table is less than 10 inches below the surface for about 6 months or more. Water is on the surface for about 4 months or more during most years. The available water capacity is low in the surface and subsurface layers and low to high in the subsoil. Permeability is rapid to very rapid in the surface and subsurface layers, moderate to rapid in the upper part of the subsoil, and moderately slow to moderate in the lower part. Natural fertility is low. Organic matter content in the surface layer is moderately low.

Pompano sand - This nearly level poorly drained soil is on poorly defined flats in the broad flatwoods and in shallow depressions in the sandy, rolling uplands. Slopes are nearly smooth on the broad flats and are slightly concave in the shallow depressions. They range form 0 to 2 percent. The shape of the areas is variable. They are usually relatively small in size and range from about 10 to 45 acres.

Typically, the surface layer is very dark gray sand about 5 inches thick. The underlying layers are sand to a depth of depth of 82 inches or more. The upper 20 inches is light brownish gray and has pale brown mottles, the next 45 inches is gray and has mottles, and the lower 12 inches is gray and has no mottles.

Included with this soil in mapping are a few small areas of soils that have a black or very dark gray, sandy surface layer 6 to 10 inches thick. In a few areas are small inclusions of Chipley, Placid, Plummer and Myakka soils. A few small areas of Pompano soils have 2 to 5 percent slopes. About 250 acres mapped as Pompano soil

adjacent to the Santa Fe River along the northern boundary of the county is occasionally flooded for periods of about 1 to 3 weeks. Total included areas are about 15 percent or less.

This Pompano soil has a water table that is less than 10 inches from the surface for 2 to 6 months during most years. Surface runoff is slow. The available water capacity is very low. Permeability is very rapid. The natural fertility is low. Organic matter content of the surface layer is moderately low to moderate.

Pompano fine sand – This soil is nearly level and poorly drained. It is adjacent to poorly defined drainage-ways and in broad, flat, low areas countywide. Mapped areas are irregular in shape, long and narrow, or nearly circular, ranging from five to 200 acres. Slopes are less than two percent.

Typically, the surface layer is black fine sand about five inches thick. Underlying material, to a depth of 80 inches, is light brownish gray and light gray fine sand.

Small areas of Adamsville and Basinger soils are included in maps of this area. Also included are soils similar to Pompano soil but having an organic layer two to six inches thick; soils having a surface layer more than 20 inches thick; and soils having a sandy loam subsoil layer at a depth of more than 40 inches.

The water table is within 10 inches of the surface layer for two to six months. It is more than 30 inches below the surface during extended dry periods. This soil has slow internal drainage. Permeability is rapid, and runoff is slow. The available water capacity is very low. Reaction ranges from very strongly acid to mildly alkaline. Natural fertility is low.

Pompano fine sand, depressional – This soil is nearly level and poorly drained. It is in depressions on the flatwoods and in the river valley lowland parts of the county. The mapped areas are irregular in shape or somewhat circular and range from about five to 150 acres. The slopes are two percent or less.

Typically, the surface layer is a dark gray fine sand about nine inches thick. The underlying material to a depth of 80 inches or more is light brownish gray, gray, and light gray fine sand.

Included with this soil in mapping are small areas of Adamsville, Basinger, Eau Gallie, Kanapaha, and Tavares soils. The included soils make up less than 20 percent of the map unit.

This soil is ponded for three to nine months. In slightly elevated positions around the margins of the ponded areas, the water table is within 10 inches of the surface, and these areas are ponded in years of heavy rainfall. The water table is rarely at a depth of more than 10 inches. Permeability is rapid. The available water capacity is very low. Reaction ranges from very strongly acid to mildly alkaline. Natural fertility is low or very low.

Pottsburg fine sand, high, 0 to 3 percent slopes – This soil is nearly level, somewhat poorly drained soil on the flatwoods at slightly higher elevations than the surrounding soils. Individual areas arise from sandy marine sediments which are convex in shape and range from 3 to 150 acres in size.

Typically, the surface layer is gray fine sand about 3 inches thick. The subsurface layer extends to a depth of 57 inches. It is brown fine sand 7 inches thick, grayish brown fine sand 24 inches thick, and light gray fine sand 23 inches thick. The subsoil, between depths of 57 and 80 inches, is dark reddish brown fine sand that is weakly cemented and well-coated with organic matter. These soils are moderately permeable generally the high water table is at a depth of 6 to 24 inches.

Pottsburg Fine Sand, occasionally flooded - This soil is nearly level and poorly drained. It is on the flood plains. The mapped areas are irregular in shape or elongated and range from 50 to 500 acres. The slopes are nearly smooth and range from 0 to 2 percent.

Typically, this soil has a surface layer of very dark gray fine sand about 4 inches thick. The subsurface layer is fine sand. The upper part, to a depth of 25 inches, is grayish brown. The next layer, to a depth of 46 inches, is gray. The lower part, to a depth of 65 inches, is light gray. The subsoil to a depth of 80 inches or more is dark, reddish brown fine sand. The sand grains in the subsoil are well coated with organic material.

Included with this soil in mapping are small areas of Hurricane, Leon, Lynn Haven, Osier, Plummer, and Rutlege soils. Also included are soils that are similar to Pottsburg soil but have a stained layer at a depth of more than 50 inches. The included soils make up 20 percent or less of the map unit.

This soil has a high water table at a depth of less than 12 inches for 1 to 4 months during most years. It recedes to a depth of more than 40 inches during very dry periods. Flooding occurs about every 2 or 3 years. The available water capacity is low. The permeability is moderate.

Pottsburg sand - This is a nearly level, poorly drained soil in the broad areas of the flatwoods. Slopes are nearly smooth and range from 0 to 2 percent. The areas are usually irregular in shape and range from about 15 to 250 acres.

Typically, the surface layer is black sand about 8 inches thick. The subsurface layer is gray to light gray sand to a depth of 52 inches. The subsoil is dark grayish brown to very dark brown sand to a depth of 86 inches or more.

Included with this soil in mapping are small areas of Chipley, Myakka, Plummer, Pompano, and Zolfo soils. Also included are small areas of soils that are similar to this Pottsburg soil except that they have a black or very dark gray surface layer 8 to 15 inches thick or have a water table at a depth of 12 to 30 inches for about 1 to 4 months during most years. Total included areas are about 20 percent or less.

The Pottsburg soil has a water table that is at a depth of less than 12 inches for 1 to 4 months and is at a depth of 12 to 40 inches for 4 months or longer during most years. During drier periods, the water table recedes to more than 40 inches below the surface. Surface runoff is slow. The available water capacity is low to a depth of about 52 inches and is medium to very high below this depth. Permeability is rapid to a depth of about 52 inches. It is moderate below this depth. Natural fertility is low. Organic matter content of the surface layer is moderately low to moderate.

Quartzipsamments - Quartzipsamments soil is nearly level to gently sloping. It has been reworked and shaped by earthmoving equipment. This map unit commonly is adjacent to urban lands but can occur throughout the country. Many areas of this soil were formerly sloughs, marshes, shallow ponds, or other areas of standing water. These areas have been filled with sandy soil material to the level of the surrounding landscape, or higher. In a few areas, this soil originally was on the high ridges that were excavated to below natural ground level. Smoothing and shaping have made the soil better suited to use as sites for buildings, roads and streets, recreation areas, and other related uses.

The color and thickness of the various layers of this soil are variable. One of the more common profiles has a surface layer of mottled, brownish-yellow and pale brown, fine sand 54 inches thick. The upper part of the underlying material, to a depth of 59 inches, is dark gray, fine sand. The lower part to a depth of 80 inches is brownish-yellow, fine sand.

The depth of the water table is variable, but ranges from about 20 inches to more than 72 inches depending on the thickness of the fill material and drainage of the underlying soil. In most excavated areas, the water table is at a depth of more than 72 inches. Permeability is variable, but generally is very rapid. The available water capacity is also variable, but generally is very low. Natural fertility is very low.

In most parts of the county, the soil has slight limitations to use as septic tank absorption fields if sufficient fill material has been added to lower the water table to a suitable depth. If the fill layer is too thin and the area was formerly a ponded site, this soil has severe to moderate limitations to use as septic tank absorption fields if a drainage system has not been installed to remove the excess water. Seepage is a severe limitation if this sandy soil is used for sanitary landfills or sewage lagoons unless the facilities are sealed to help prevent ground water contamination.

Redlevel fine sand – This soil is nearly level and somewhat poorly drained. It is on the flatwoods in the western part of the county between the coastal marshes and the upland ridges. Depth to limestone bedrock typically ranges from 40 to 60 inches. Stones and boulders are scattered on the surface and throughout the subsoil in some horizons.

Typically, the surface layer is dark brown and dark grayish brown fine sand 7 inches thick. The subsoil to a depth of 55 inches is yellowish brown and strong brown fine sand underlain by limestone bedrock.

Included with this soil (less than 20 percent of the map unit) are small areas of Adamsville, Boca, Broward, Hallandale, and Pompano soils. Also included are areas of rock outcrop.

The water is at a depth of 20 to 40 inches for 2 to 4 months. It may rise above 20 inches during very wet periods in some years. Permeability is rapid. Both the available water capacity and natural fertility are low.

Ridgewood Fine Sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and is somewhat poorly drained. It is in relatively small areas on the broad flatwoods and along transitional areas on the uplands that are between the many small creeks and streams in the county. The mapped areas are irregular in shape and range from 15 to 80 acres. The slopes generally are convex.

Typically, this soil has a surface layer of dark gray fine sand about 5 inches thick. The underlying material is fine sand. The upper part, to a depth of 13 inches, is pale brown. The next layer, to a depth of 24 inches is very pale brown with brownish yellow mottles. Below that layer, to a depth of 56 inches, the underlying material is light gray with mottles. The lower part to a depth of 80 inches is light gray.

Included with this soil in mapping are small areas of Albany, Hurricane, Ortega, Osier, and Plummer soils. The included soils make up about 15 percent of the map unit.

This soil has a high water table at a depth of 24 to 40 inches for 2 to 4 months during most years. During extreme wet periods, the high water table is at a depth of 15 to 24 inches for brief periods of less than 3 weeks. During dry periods, it is at a depth of more than 40 inches. The available water capacity is low. The permeability is rapid.

Riviera sand - This is a nearly level, poorly drained soil that formed in stratified, unconsolidated sandy and loamy materials in the broad flatwoods. Slopes are nearly smooth and are less than 2 percent. Areas are small and irregularly shaped.

Typically, the surface layer is very dark gray sand about 5 inches thick. The subsurface layer is sand about 27 inches thick. The upper 8 inches is grayish brown, and the lower 19 inches is gray. The subsoil is gray sandy clay loam that extends to a depth of 53 inches. The upper 10 inches of the subsoil has large streaks of gray sand. Between depths of 53 and 80 inches, the underlying material is gray, mixed sandy loam, loamy sand, and sand.

In this soil, the water table is less than 10 inches below the surface for 2 to 4 months during most years and at a depth of 10 to 40 inches for much of the remainder of the year. During dry seasons it may recede to a depth of more than 40 inches. Surface runoff is slow. Available water capacity is low to a depth of about 32 inches, medium from 32 to 55 inches, and low below this depth. Permeability is rapid to a depth of about 32 inches,

slow from 32 to 55 inches, and moderate to moderately rapid from 55 to 62 inches. Organic matter content is low. Natural fertility is low in the sandy upper 32 inches and medium below this depth.

Rock outcrop-Homosassa-Lacoochee complex – This complex consists of limestone rock outcrop and Homosassa and Lacoochee soils that are in tidal saltwater marshes and on some offshore islands along the Gulf Coast.

Rock outcrop makes up about 40 percent of the map unit but ranges from about 10 to 90 percent in individual delineations. Homosassa soil makes up about 35 percent, while Lacoochee soil comprises about 15 percent.

In some areas, rock outcrop is exposed large, flat surfaces pitted with solution holes. In other areas, such as sites near Ozello, it is highly fractured and pitted and is partly dissolved along fractures.

Typically, Homosassa soil has a surface layer that is black mucky fine sandy loam about 8 inches thick. Below that, dark grayish brown fine sand extends to a depth of 21 inches and is underlain by hard limestone bedrock. Lacoochee soil typically has a surface layer that is light gray fine sandy loam about 5 inches thick. The subsurface layer, to a depth of 8 inches, is grayish brown loamy fine sand. The subsoil, to a depth of 13 inches, is yellowish brown loamy fine sand. Below that, white soft limestone bedrock extends to a depth of 21 inches and is underlain by hard, white limestone bedrock.

Included with these soils (about 10 percent of the map unit) are small areas of Weekiwachee soils. Also included are some areas of soils that are similar to Homosassa and Lacoochee soils but are less than 10 inches to bedrock.

The soils in this map unit are flooded daily by high tides. Some of the included soils on the elevated parts of this map unit are periodically flooded by exceptional high tides and storm tides. The available water capacity of Homosassa and Lacoochee soils is very high in the surface layer and moderate in the deeper layers.

Rutlege mucky fine sand, 0 to 2 percent slopes, frequently flooded – This very poorly drained soil is located on flood plains of the Lower Coastal Plain. It is derived from sandy marine sediments that formed concave slopes ranging from 3 to 100 acres in size.

Typically, the surface layer is black mucky fine sand in the upper 10 inches and dark gray fine sand in the lower 4 inches. The subsurface layer is very dark gray fine sand about 4 inches thick. The subsoil extends to a depth of 80 inches. It is dark gray fine sand in the upper park, gray fine sand in the middle part, and light gray in the lower part.

Rutlege mucky fine sands are rapidly permeable. Generally, the high water table is at or above the surface, and areas are subject to frequent flooding for brief periods.

Samsula muck - This nearly level, very poorly drained organic soil is in large and small swamps, marshes, and ponded areas in the broad flatwoods. Slopes are usually slightly concave and range from 0 to 1 percent. Areas are circular, irregular in shape, or elongated. They are both large and small in size and range for about 20 to 300 acres.

Typically, the surface layer is muck about 35 inches thick. The upper 8 inches is very dark brown, and the lower 27 inches is very dark gray. Between depths of 35 and 75 inches, the underlying layer is sand. The upper 7 inches is dark gray, the next 11 inches is light brownish gray, and the lower 17 inches is light gray.

Included with this soil in mapping are small areas of Monteocha, Okeechobee, Plaid, Surrency, and Terra Ceia soils. A few areas have small inclusions of soils that have organic material 40 to 60 inches thick over sandy or loamy material. Total included areas are about 20 percent or less.

The Samsula soil has water at or on the surface for more than 6 months during most years. The water table is within 10 inches of the surface for most of the remainder of the year, except during long, extended dry periods. The available water capacity is very high in the organic layer. It is very low in the underlying sandy layer. Permeability is rapid. Natural fertility is medium. Organic matter content in the surface layer is very high.

Samsula-Martel complex, depressional – This complex has a nearly level to gentle slope (0 to 2 percent) and a concave down-and-across-slope shape. It is a very poorly drained soil that formed in herbaceous organic material over sandy, loamy, and clayey marine deposits. The water table is at the surface (0 inches), and available water capacity is high (to about 10.8 inches). Ponding is frequent.

This complex is comprised of Samsula and similar soils (38 percent), Martel variant and similar soils (32 percent), and minor components (30 percent). The latter are Placid, depressional (15 percent) and Pompano, depressional (15 percent) soils.

In a typical profile, muck extends to a depth of 31 inches, with sand occurring from 11 to 49 inches below the surface. The lower layers are comprised of sandy clay (42 to 73 inches) mixed in with sandy clay loam (49 to 60 inches).

Sapelo fine sand - This poorly drained, nearly level soil is in the flatwoods. Slopes are nearly smooth to concave and range from 0 to 2 percent.

Typically, the surface layer is very dark gray fine sand about 6 inches thick. The subsurface layer, to a depth of about 18 inches, is light gray fine sand. The upper part of the subsoil, to a depth of 31 inches, is black, dark reddish brown, and yellowish brown fine sand. Below this, to a depth of 48 inches, is an intervening layer of light gray fine sand. The lower part of the subsoil, to a depth of 70 inches, is light gray fine sandy loam and sandy clay loam. The underlying material to a depth of 80 inches or more is light gray fine sandy loam.

Permeability is moderate or moderately low in the Sapelo soil. Available water capacity is low. The seasonal high water table is at a depth of 6 to 18 inches during wet periods.

Scranton Fine Sand - This soil is nearly level and somewhat poorly drained. It is in relatively small areas on the broad flatwoods and along transitional areas between the uplands and the many small creeks and streams in the county. The mapped areas are irregular in shape and range from 15 to 200 acres. The slopes are nearly smooth and range from 0 to 2 percent.

Typically, this soil has a surface layer of very dark grayish brown fine sand about 9 inches thick. The underlying material is fine sand. The upper part, to a depth of 22 inches, is dark gray. The next layer, to a depth of 41 inches, is grayish brown. Below that layer, to a depth of 61 inches, the underlying material is light brownish gray. The lower part to a depth of 80 inches is light gray.

Included with this soil in mapping are small areas of Leon, Ona, Osier, Plummer, Ridgewood, Sapelo and Rutlege soils. The included soils make up about 15 percent of the map unit. This soil has a high water table at a depth of 6 to 18 inches for 3 to 6 months during most years. During dry periods, it is at a depth of more than 40 inches. The available water capacity is low. The permeability is rapid.

Shadeville-Otela fine sands, 0 to 5 percent slopes - These soils are nearly level and gently sloping and are moderately well drained. They are on uplands. Sinkholes are common in some areas. Individual areas are irregular in shape and range from about 10 or more than 1,000 acres in size. Slopes are convex or concave. Typically, the surface layer of the Shadeville soil is very dark gray fine sand about 9 inches thick. The subsurface layer is grayish brown and pale brown fine sand. It extends to depth of about 32 inches. The subsoil is very pale brown sandy clay loam about 6 inches thick and light brownish gray sandy clay loam about 4 inches thick.

Limestone bedrock is at a depth of about 42 inches. It varies considerably over short distances. Typically, the surface layer of the Otela soil is dark grayish brown fine sand about 10 inches thick. The subsurface layer extends to a depth of about 51 inches. The upper part is light yellowish brown fine sand, and the lower part is very pale brown fine sand that has thin bands of sandy loam. The upper 11 inches of the subsoil is light yellowish brown sandy clay loam. The upper 11 inches of the subsoil is light yellowish brown sand clay loam. The lower part to a depth of about 80 inches is light gray sandy clay loam.

Shenks muck - This nearly level, very poorly drained organic soil is in the wetter parts of the large prairies and marshes in the southern and eastern parts of the county. Slopes are nearly smooth to slightly concave and are less than 2 percent. The areas are usually irregular or elongated in shape and range from about 200 acres to more than 500 acres.

Typically, the surface layer is muck about 21 inches thick. The upper 18 inches is dark brown, and the lower 3 inches is black. The underlying material extends to a depth of 82 inches or more. The upper 7 inches is black clay loam, the next 23 inches is gray clay, the next 10 inches is dark gray clay and the lower 21 inches is gray, mottled clay.

Included with this soil in mapping are small areas of Ledwith, Martel, Okeechobee and Terra Ceia soils. Total included areas are less than 20 percent.

This Shenks soil has a water table that is at or above the surface except during extended dry periods. The available water capacity of the organic surface layer is very high, and it is medium to very high in the clayey underlying material. Permeability is rapid or very rapid in the surface layer and very slow or slow in the clayey material below. Natural fertility is high. Organic matter content of the surface layer is very high.

Sparr fine sand - This nearly level, somewhat poorly drained soil is in relatively small areas on slight rises of the flatwoods and on nearly smooth to slightly convex slopes of the gently rolling uplands. Slope ranges from 0 to 2 percent. The areas are irregular in shape and range from about 10 to 75 acres.

Typically, the surface layer is fine sand about 8 inches thick. The upper 4 inches is dark gray, and the lower 4 inches is dark grayish brown. The subsurface layer is about 40 inches thick. The upper 17 inches is pale brown sand, the next 7 inches is very pale brown fine sand that has light yellowish brown and light gray mottles, and the lower 16 inches is light gray fine sand that has yellowish brown mottles. The subsoil extends to a depth of 84 inches or more and is light gray. The upper 8 inches is loamy sand, and the lower 28 inches is fine sandy loam.

Included with this soil in mapping are small areas of Lochloosa, Kanapaha, Newnan, Millhopper and Zolfo soils. Also included are a few small areas of soils that are similar to Sparr soils but have a surface layer of loamy sand. A few areas are Sparr soils that have of 2 to 5 percent. Total included areas are 15 percent less.

This Sparr soil has a water table that is at a depth of 20 to 30 inches for about 1 to 2 months and at a depth of 30 to 40 inches for about 2 to 3 months during most years. During dry seasons, it recedes to a depth of more than 40 inches. Surface runoff is slow. The available water capacity is medium in the sandy surface layer, Iow in the sandy subsurface layer, and medium in the loamy subsoil. Permeability is rapid to very rapid in the sandy surface and subsurface layers. It is moderate in the upper part of the subsoil and slow to moderately slow in the lower part of the subsoil. Natural fertility is low to a depth of about 48 inches and medium below this depth. Organic matter content is low to moderately low.

Sparr fine sand, 0 to 5 percent slopes – This soil is nearly level to gently sloping and somewhat poorly drained. It is in seasonally wet areas on the upland ridges, at the base of some sloping areas, and near some poorly drained areas. The slopes are smooth and slightly concave.

Typically, the surface layer is grayish brown fine sand 8 inches thick. The subsurface layer, to a depth of 50 inches, is brown, pale brown, and very pale brown fine sand. The upper part of the subsoil, to a depth of 59 inches, is light yellowish brown fine sandy loam. The middle part, to a depth of 70 inches, is light yellowish brown sandy clay loam. The lower part to a depth of 80 inches is light brownish gray sandy clay loam. Mottles of brown, red, yellow, and gray occur from a depth of about 20 to 80 inches.

Included with this soil are small areas of Arredondo, Kendrick, and Lochloosa soils. Also included are small areas of Sparr soils that have slopes of more than 5 percent and a few small areas of soils that are similar to Sparr soils but have limestone boulders in the subsoil. These areas are mainly adjacent to soils that contain bedrock or boulders in their profiles.

The water table is at a depth of 2.5 to 3.5 feet for periods of 1 to 4 months. Permeability is rapid in the sandy surface and subsurface layers and slow in the subsoil. Runoff is slow. The available water capacity is low to moderate. Natural fertility is low.

Sparr fine sand, 5 to 8 percent slopes - This soil is moderately sloping and somewhat poorly drained. It is on side slopes and on upland ridges. The mapped areas are irregular in shape and range from 5 to about 50 acres. The slopes are smooth to concave.

Typically, the surface layer is grayish brown fine sand about 8 inches thick. The subsurface layer, to a depth of 45 inches, is pale brown and light yellowish-brown fine sand. The upper part of the subsoil, to a depth of 51 inches, is light yellowish-brown fine sandy loam. The lower part to a depth of 80 inches is pale brown and light gray sandy clay loam.

Included with this soil in mapping are small areas of Arredondo, Kendrick, and Lochloosa soils. Also included are small areas of Sparr soils that have slopes of less than 5 percent and a small area of soils that are similar to Sparr soil but have limestone boulders in the subsoil. These areas are mainly adjacent to soils that contain bedrock or boulders in their profiles. The included soils make up less than 25 percent of the map unit.

The water table is at a depth of 1.5 to 3.5 feet for periods of 1 month to 4 months. Permeability is rapid in the sandy surface and subsurface layers and slow in the subsoil. Runoff is medium.

Surrency fine sand - This is a very poorly drained, nearly level soil in depressions, near shallow ponds, and along drainageways. The areas range form 3 to 200 acres and are circular to elongated. Concave slopes are less than 1 percent.

Typically, the surface layer is fine sand about 16 inches thick. The upper 8 inches is black, and the lower 8 is very dark gray. The subsurface layer is gray fine sand about 22 inches thick. The subsoil is grayish brown sandy clay loam with yellowish brown mottles. It extends to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Plummer, Pantego and Pelham soils. Also included are small areas of soils that are similar to the Surrency soil but have an organic surface layer less than 16 inches thick. The included soils make up about 10 percent of the map unit.

This soil has a water table at or above the surface for most of the year, and ponding is common. The available water capacity is high in the surface layer, medium in the subsurface layer, and low in the subsoil. Permeability is moderately rapid to rapid in the surface and subsurface layers and moderate in the subsoil. Natural fertility and the organic matter content are moderate.

Surrency fine sand, occasionally flooded - This is a very poorly drained, nearly level soil on the flood plains of rivers and streams. The soil is flooded occasionally as a result of heavy and prolonged rains that cause the

rivers and streams to overflow. The soil remains flooded for 30 days or more. This soil has been flooded in March or April in about 1 year out of 10. The slope is less than 1 percent.

Typically, the fine sand surface layer is about 16 inches thick. The upper 8 inches is black, and the lower 8 inches is very dark gray. The subsurface layer is about 22 inches of gray fine sand. The subsoil is grayish brown sandy clay loam with yellowish brown mottles. It extends to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Pelham and Plummer soils. Also included are small areas of soils that are similar to the Surrency soil but have clay, sand or chunks of coral in the substratum. The included soils make up less than 25 percent of the map unit.

This soil has a water table at or above the surface for most of the year. In addition to the apparent water table, this soil is covered by floodwater occasionally. The available water capacity is high in the surface layer, low in the subsurface layer, and medium in the subsoil. Permeability is moderately rapid to rapid in the surface and subsurface layers and moderate in the subsoil. Natural fertility and the organic matter content are moderate.

Surrency loamy fine sand, 0 to 2 percent slopes, frequently flooded - This consists of very poorly drained soils located in flood plains of the Lower Coastal Plain. It is derived from sandy and loamy sediments that formed concave slopes ranging from 3 to 100 acres in size.

Typically, the surface layer is about 18 inches thick. It is loamy fine sand in the upper 14 inches and dark brown fine sand in the lower 4 inches. The subsurface layer is light brownish gray fine sand about 8 inches thick. The subsoil occurs between depths of 26 and 70 inches. It is fine sandy loam. It is dark grayish brown in the upper 12 inches, dark gray in the next 11 inches, and greenish gray in the lower 21 inches. Below this, to a depth of 80 inches or more, is greenish gray sandy clay loam.

Surrency loamy fine sands are moderately permeable and moderately slowly permeable. In areas on floodplains, the high water table generally is at or near the surface and the areas are subject o frequent flooding for brief periods. In areas in depressions, the high water table generally is at or above the soil surface for very long periods.

Surrency sand - This nearly level, very poorly drained soil is in ponds and depressional areas in the broad flatwoods and in areas of wet prairie on uplands. Slopes are less than 1 percent. The areas are relatively small and range from about 10 to 40 acres.

Typically, the surface layer is black sand about 15 inches thick. The subsurface layer is light gray sand to a depth of 28 inches. Between 28 and 80 inches, the subsoil is sandy clay loam. The upper 27 inches is gray, and the lower 25 inches is light gray.

Included with this soil in mapping are small areas of Monteocha, Pomona, Samsula and Wauberg soils. Also included are small areas of soils that have a 10- to 24- inch, black or very dark gray sand or loamy sand surface layer over gray sandy clay loam subsoil. In some delineation are small areas of soils which are similar to this Surrency soil but which have 3 to 10 inches of well-decomposed organic material covering the surface. In some small areas, the subsoil decreases in clay content by 20 percent or more at a depth of about 55 to 60 inches. Total included areas are about 20 percent or less.

This Surrency soil has a water table that is within 10 inches of the surface for about 6 months or more during most years. Water is on the surface for 4 months or more. The available water capacity ranges from low to high in the surface and subsurface layers and from low to medium in the subsoil. Permeability is moderately rapid-to-rapid in the sandy surface and subsurface layers and slow to moderately slow in the loamy subsoil. Natural fertility is medium in the surface layer and is low in the subsurface layer and the subsoil. Organic matter content is high to very high in the surface layer.

Surrency, Plummer, and Cantey soils, frequently flooded – These soils, found on river and creek floodplains, are nearly level and are poorly to very poorly drained. They are frequently flooded for very long periods following prolonged, high intensity rains. Surrency and similar soils make up about 33 percent of the map unit, Plummer and similar soils make up about 32 percent, and Cantey and similar soils make up about 25 percent. Every soil is not in every mapped area; the relative proportion of combinations varies.

The Surrency soil is very poorly drained. Typically, the surface layer is black loamy sand about 10 inches thick. The subsurface layer, to a depth of about 33 inches, is light brownish gray sand. The subsoil, which extends to a depth of about 80 inches, is comprised of two parts. The upper part is dark gray sandy clay loam, while the lower part is gray sandy clay.

Plummer soils are poorly drained. Typically, the surface layer is black fine sand about 4 inches thick. The subsurface layer has two parts: an upper part that is light gray fine sand and lower part that is light brownish gray fine sand and extends to a depth of 58 inches. The subsoil, to a depth of 80 inches or more, is light brownish gray, sandy clay loam.

Cantey soil is poorly drained. Typically, the surface layer is about 10 inches thick. The top 5-inch layer is very dark gray fine sandy loam, while the lower part is dark gray fine sandy loam. The subsurface layer, to a depth of 19 inches, is light brownish gray, fine sandy loam. The subsoil is comprised of two parts: the upper part is light brownish gray sandy clay and the lower part, to a depth of about 80 inches or more, is gray, mottled sandy clay.

The seasonal high water table in this mapping unit is at a depth of 0 to 6 inches. The Surrency and Plummer soils are characterized by a moderate permeability and low available water capacity. Of the Cantey soil, permeability and available water capacity are slow and moderate, respectively.

Tavares fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and moderately well drained. It occurs on knolls and ridges throughout the county and on lower ridges in the uplands. The mapped areas are long and narrow or somewhat circular and range from 5 to 200 acres. The slopes are 5 percent or less.

Typically, the soil consists of fine sand throughout. The surface layer is dark grayish brown about 3 inches thick. The upper part of underlying material, to a depth of 63 inches, is very pale brown. The lower part to a depth of 80 inches is white.

Included with this soil in mapping are small areas of Adamsville, Candler, and Lake soils. Also included are small areas that are similar to Tavares soil but have a few limestone boulders at a depth of about 60 inches or more. The included soils make up about 20 percent of the map unit

The water table is between depths of 40 and 72 inches for up to 6 months. Permeability is rapid or very rapid. The available water capacity is very low. The soil becomes droughty during periods of low rainfall. Reaction ranges from extremely acid to medium acid in the surface layer and from very strongly acid to medium acid in the other layers. Natural fertility is low.

Tavares sand, 0 to 5 percent slopes - This is a nearly level to gently sloping, moderately well drained soil. This soil is deep and sandy. It is on slightly convex slopes in broad areas of the flatwoods and along gentle slopes of the rolling uplands. The areas are mainly irregular in shape and range from about 10 to 125 acres.

Typically, the surface layer is dark gray sand about 8 inches thick. The underlying layers are sand to a depth of 80 inches or more. The upper 11 inches is pale brown, the next 17 inches is very pale brown, and the lower 44 inches is very pale brown or white and has mottles.

Included with this soil in mapping are small areas of Tavares soils that have 5 to 8 percent slopes. Also included are small areas of Chipley, Candler, Apopka, Pompano, and Zolfo soils. About 120 acres of this soil mapped along the Santa Fe River is occasionally flooded. Total included areas are about 15 percent.

In this Tavares soil, the water table is at a depth of 40 to 72 inches for a cumulative period of 6 months or more during most years. It recedes to more than 72 inches below the surface during droughty periods. Surface runoff is slow. The available water capacity is very low to low. Permeability is rapid to very rapid. Natural fertility is low, and organic matter content is low to moderate in the surface layer.

Terra Ceia muck – This nearly level, very poorly drained organic soil is in freshwater marshes and in large areas on wet prairies. This soil is in the southern and eastern parts of the county. Slopes are nearly smooth to slightly concave and are less than 1 percent. The individual areas are irregular or elongated in shape and range from 60 to 300 acres.

Typically, the surface layer is muck about 68 inches thick. The upper 12 inches is black, and the lower 56 inches is dark reddish brown. The underlying material is very dark gray clay to a depth of 75 inches or more.

Included with this soil in mapping are small areas of Ledwith, Martel, Monteocha, Okeechobee, Pompano, Samsula, and Shenks soils. Total included areas are less than 15 percent. This Terra Ceia soil has a water table that is at or on the surface during most of the year. Available water capacity of the organic material is very high. Permeability is rapid in the organic material and very slow to slow in the underlying material. Natural fertility is high. Organic matter content in the muck is very high.

Terra Ceia-Okeelanta association, frequently flooded - This association consists of nearly level, very poorly drained, organic soils found along the edges of freshwater rivers and lakes. Terra Ceia soil is adjacent to the open water and makes up about 65 percent of the complex. It has a 10 inch surface layer of black muck, and a subsurface layer of black and red-brown muck that extends to a depth of 80+ inches. Okeetlanta soil borders the inland side and makes up about 20 percent of the complex. This soil has a 10 inch surface layer of black muck, and a subsurface layer of dark brown muck that extends to a depth of about 27 inches. It also contains an underlying layer of light gray, fine sand that extends to a depth of 65 inches. Small areas of Basinger and Lauderhill soils, and areas of rock outcrop are also included in this association.

During low tide, the soils in this association are covered by shallow water from the adjacent streams and rivers. At high tide, flood waters are generally 2 to 3 feet above the surface. This daily fluctuation of flooding allows for discharge of the river.

Tidewater mucky clay, frequently flooded - This unit consists of very poorly drained, deep to very deep Tidewater soils. These nearly level, frequently flooded soils are on areas of tidal marsh. Typically, the surface layer extends to a depth of about 40 inches. It is very dark brown mucky clay to a depth of about 10 inches, black silty clay to a depth of about 24 inches, and black sandy clay loam below that. The underlying material extends from a depth of 40 inches to a depth of 76 inches. It is a mixture of black and very dark grayish brown loamy fine sand. Limestone bedrock is at a depth of 76 inches.

Tisonia mucky peat, frequently flooded - This is nearly level, very poorly drained soil is in broad tidal marshes. It is subject to flooding daily during high tide. The mapped areas range from 10 to 1,000 or more acres. Slopes are smooth and are 0 to 1 percent.

In 98 percent of the areas mapped as Tisonia mucky peat, frequently flooded, Tisonia soils make up 95 to 100 percent of the map unit. Dissimilar soils make up 0 to 5 percent. They generally are in areas less than 5 acres in size.

Typically, the surface layer is very dark grayish brown mucky peat about 40 inches thick. The underlying material, to a depth of 65 inches, is dark olive gray clay.

Included in this map unit are small areas of dissimilar soils. These are Maurepas and Kingsland soils. They are in drainageways. Trees grow on these soils.

Permeability of this Tisonia soil is rapid in the upper part of the soil and very slow in the lower part. The available water capacity is very high. The seasonal high water table is at or near the surface during most of the year.

Tisonia mucky peat, 0 to 1 percent slopes, very frequently flooded - This is a level to nearly level, very poorly drained soil of tidal marshes. Individual areas range in size from 10 to 1,000+ acres. Slopes range from 0 to 1 percent.

Typically, the surface layer is dark grayish brown mucky peat about 18 inches thick. It is underlain by dark olive-gray clay that extends to a depth of 65 inches or more.

Under natural conditions, this moderately acid to slightly alkaline soil has a water table at or near the surface. Tidal action inundates this soil twice daily for brief periods. Permeability is rapid in the surface layer and very slow in the clayey material. Natural fertility is low, and organic matter content is very high. Available water content is high.

Tisonia mucky peat, tidal - This poorly drained, nearly level soil occurs in broad tidal marshes. This soil floods daily during high tide. The surface layer is a dark brown mucky peat to approximately 40 inches. Underlying material is a dark olive gray clay to about 65 inches.

Troup fine sand, 2 to 5 percent slopes - This is a well-drained, gently sloping soil on broad ridges and undulating terrain. The areas range from 20 to 400 acres and are irregular in shape.

Typically, the surface layer is dark brown fine sand about 8 inches thick. The upper 30 inches of the subsurface layer is reddish yellow loamy sand, and the lower 14 inches is strong brown loamy sand. The subsoil extends to a depth of 80 inches. The upper 6 inches is strong brown fine sandy loam; the next 9 inches is yellowish red sandy clay loam; and the lower 13 inches is yellowish red sandy clay loam with brown mottles.

Included with this soil in mapping are small areas of Blanton, Chiefland, Fort Meade Variant, Ocilla, Lucy and Orangeburg soils. These soils make up less than 15 percent of the map unit.

This Troup soil does not have a water table within a depth of 72 inches. The available water capacity is low in the surface and subsurface layers and medium in the subsoil. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. Natural fertility and the organic matter content are low.

Troup sand, 0 to 5 percent slopes – This soil is nearly level to gently sloping, well-drained, and found on the Coastal Plain uplands. Typically, the surface layer is dark grayish brown sand about 8 inches thick. The subsurface layer has two parts. The upper part is a dark yellowish-brown sand, to a depth of 18 inches, and below this, to 68 inches, is yellowish brown sand. The subsoil also has two parts: a strong brown loamy sand, to a depth of 74 inches, comprises the upper part, while the lower part is a strong brown sandy clay loam extending to a depth of 80 inches or more. Permeability of this soil is moderate, and available water capacity is very low. The seasonal high water table is below 72 inches from the surface.

Udalfic Arents, 0 to 5 percent slopes - This mapping unit is mixed material that has been smoothed and shaped. This material was piled adjacent to surface mines during mining. It was later spread over the surface of adjacent soils and then shaped or leveled. It is commonly about 24 to 48 inches thick, but in places is more

than 60 inches thick. In a few areas it is about 1 to 5 percent hard limestone fragments. The soils buried under this material have retained their original properties. In about 55 percent of the delineated areas, they can be identified. These areas are about 60 percent Fellowship, Hague, Kendrick, and Zuber soils and 40 percent Arredondo and Candler soils. The water table is below a depth of 72 inches.

Included in this unit in mapping are a few areas of fill material that is mostly sandy soil and small areas where only about 12 to 24 inches of mixed material overlies uniform soil material. Also included are a few small areas where organic and inorganic refuse have been placed in old mines. This refuse has been mixed with fill material and is also used as cover material. In a few spots the water table is within 20 to 72 inches of the surface. Included areas make up about 15 percent of this unit.

Udalfic Arents, 15 to 60 percent slopes - This mapping unit is welldrained, mixed soil material and unconsolidated material that has been excavated from and piled adjacent to mine pits. The materials remain in the position in which they were deposited, and areas are generally small. The water table is at a depth of more than 72 inches.

Included in this unit in mapping are several small areas of Udalfic Arents, 0 to 5 percent slopes. In a few areas, the mixed soil material is dominantly pale brownish sandy material. Included soils make up less than 12 percent of any one mapped area.

Weeds, shrubs, and grasses have become established in some areas. In some of the older areas, a number of trees have reseeded naturally. Many areas are bare or have sparse vegetation.

Udorthents, 0 to 5 percent slopes – This map unit consists of nearly level to gently sloping manmade soils. These soils are mainly in the central part of the county and generally are adjacent to pits. Most of these soils are in areas that have been mined and in a few areas where the mines are still active. In some areas, pits have been partly filled with the Udorthents. The slopes are dominantly 5 percent or less. In a few areas, these soils have a somewhat undulating surface consisting of a series of short, moderately steep slopes that range from 12 to 20 percent.

These soils are a highly variable mixture of sandy and loamy overburden material (removed to obtain the phosphate or limestone deposits), geologic material from mining operations, and colloidal clay material. Each area of these soils differ, reflecting the differences in individual mined deposits and mining methods used.

Three very generalized kinds of pedons make up the Udorthents. One kind consists chiefly of loamy material to a depth of 80 inches or more. A second kind consists of thick to thin layers of sands alternating with finer textured material, mainly colloidal clays. The third kind consists of a sandy to loamy matrix that contains few to common bands, strips, and pockets of clayey material mixed throughout.

All of these generalized pedons are in most areas and are intermixed. In most areas, few to common broken fragments of limestone, chert, and low-grade phosphate rock are throughout the soils. Boulders of these materials are in a few areas. In most areas, the surface is sandy, but in a few areas, it is a thin to thick layer of clayey material. Soil color is variable and ranges from white and gray to shades of yellow, brown, and red. In vegetated areas, a dark layer has formed on the surface. The thickness of the Udorthents is commonly 80 inches or more but ranges from 20 to more than 80 inches. In a few areas, hard or soft bedrock is at a depth of 60 to 80 inches

Included with these soils in mapping are small areas of Arredondo, Astatula, Candler, Ft. Meade, Kendrick, Lake, Sparr, and Tavares soils. Also included are slime ponds (areas upon which colloidal suspensions of clayey material were pumped) and areas of Candler soils and Udorthents which have had a thin layer of clayey material spread on the surface to improve the agricultural properties of the soils.

Soil drainage is variable and ranges from excessively drained to well drained in sandy areas and is poorly drained in areas that have a high content of clay. A perched water table is on the clayey layers. Permeability ranges from rapid in the sandy areas to slow in areas of high clay content. The available water capacity ranges from very low to medium.

Udorthents, loamy – This map unit consists of areas that have been excavated by earth-moving equipment. Excess water ponds in low-lying areas for long periods after heavy rainfall. Slopes are highly variable, ranging from nearly level to steep. Typically, these soils are sandy clay loam to a depth of 60 inches. The upper part is mottled strong brown, weak red, light gray, and pale yellow to a depth of about 13 inches. The next part, to a depth of about 33 inches, is dark reddish brown, strong brown, and white. The lower part is coarsely mottled dark reddish brown, strong brown, and white, with large pockets of sandy loam material. The surface layer of these soils is very sticky when wet and dries slowly. Soil properties, including permeability, depth to the water table, and available water capacity, are too variable to estimate.

Urban land - This urban land consists of areas that are 75 percent or more covered with streets, houses, commercial buildings, parking lots, shopping centers, industrial parks, airports, and related facilities.

Wacahoota loamy sand, 5 to 8 percent slopes – This is a sloping, poorly-drained soil that occurs as small, sharp-breaking areas or large areas on long slopes in the uplands. It is saturated with a water table that, as a result of hillside seepage, is within 10 inches of the surface for 1 month to 4 months during most years. Surface runoff is medium.

Included with this soil in mapping are a few spots of Blichton, Boardman, Fellowship, and Flemington soils and a few small areas where the soil is 25 to more than 35 percent gravel or rock fragments less than 3 inches in diameter. Also included are spots of a soil similar to Wacahoota loamy sand and some areas of a Blichton soil, both of which have slopes of 2 to 5 or 8 to 12 percent. The rock outcrop and sinkholes that occur in some areas are identified by spot symbols on the soil map. Included soils make up less than 20 percent of any one mapped area.

Waccasassa-Demory complex, flooded – These poorly drained, shallow or very shallow, nearly level soils are on low ridges. They are rarely flooded and occasionally flooded. Individual areas are generally irregular in shape and range from 2 to more than 10,000 acres in size. Slopes range from 0 to 2 percent.

Typically, the surface layer of the Waccasassa soil is very dark grayish brown sandy clay loam about 2 inches thick. The subsoil is dark yellowish brown sandy clay loam to a depth of about 12 inches. Limestone bedrock is at a depth of about 12 inches.

Typically, the surface layer of the Demory soil is very dark brown sandy clay loam to a depth of about 6 inches. The underlying material is dark yellowish brown sandy clay loam, and extends to a depth of about 11 inches. Limestone bedrock is at a depth of about 11 inches.

Generally, the mapped areas average about 53 percent Waccasassa and similar soils and 37 percent Demory and similar soils. The components of this map unit are so intermingled that it is not practical to map them separately at the scale used in mapping. However, the proportions of the Waccasassa and Demory soils and of the similar soils are fairly consistent in most mapped areas.

On 95 percent of the acreage mapped as Waccasassa-Demory complex, flooded, Waccasassa, Demory, and similar soils make up about 81 to 99 percent of the mapped areas. Dissimilar soils make up about 1 to 19 percent. ON 5 percent of the acreage, the dissimilar soils make up more than 19 percent of the mapped areas.

Included in mapping are soils that are similar to the Waccasassa and Demory soils but have a surface layer of fine sand, loamy fine sand, fine sandy loam, or muck that is more than 3 inches thick; have more than 5 percent gravel in the surface layer; are sandy throughout; or have bedrock within a depth of 4 inches.

The seasonal high water table is within a depth of 12 inches in the Waccasassa and Demory soils for 2 to 6 months in most years. During dry periods it is within crevices and solution holes in the bedrock. Areas of this map unit are flooded by adjacent creeks for periods of 2 to 7 days during some years. Permeability is moderately slow in both soils. Available water capacity is very slow in both soils.

Wadley fine sand, 0 to 5 percent slopes - This upland soil is nearly level and gently sloping and is well drained. Individual areas are irregular in shape and range from about 5 to more than 60 acres in size. Slopes are nearly smooth or convex. Typically, the surface layer is dark grayish brown fine sand about 8 inches thick. The subsurface layer is fine sand. It extends to a depth of about 43 inches. The upper 11 inches is pale brown, the next 16 inches is brownish yellow, and the lower 8 inches is very pale brown. The subsoil extends to a depth of about 80 inches. The upper 29 inches is strong brown sandy clay loam, and the lower 8 inches is light yellowish brown sandy loam.

Wahee fine sandy loam, 0 to 4 percent slopes - These are very deep, somewhat poorly drained soils on floodplains along rivers or creeks. Occasional flooding may occur for long periods following prolonged, high intensity rains. Typically, the surface layer is very dark gray fine sandy loam 5 inches thick underlain by brown grading to gray clay to a depth of 56 inches, and gray sandy clay loam to depths of 80 inches or more. Included with this soil in mapping are small areas of Eunola and Ocilla soils and of loamy soils and similar soils with sandy surface and subsurface layers more than 20 inches thick and a slope of 5 to 8 percent. Wahee soils have slow permeability and the seasonal high water table is at 6 to 18 inches for December through March during most years.

Wauberg sand - This nearly level, poorly drained soil is mostly in large areas on prairie in the southern part of the county. Slopes are nearly smooth to slightly concave and range from 0 to 2 percent. The areas are irregular and elongated in shape. They range from about 40 to 500 acres.

Typically, the surface layer is sand about 9 inches thick. The upper 5 inches is black, and the lower 4 inches is very dark gray. The subsurface layer is about 15 inches thick. The upper 10 inches of this layer is grayish brown sand, and the lower 5 inches is light brownish gray sand. The subsoil is sandy clay loam to a depth of 63 inches. The upper 26 inches is dark gray, and the lower 23 inches is gray. Between depths of 63 and 81 inches, the underlying material is gray, mottled clay.

Included with this soil in mapping are small areas of Emeralda, Ledwith, Shenks and Surrency soils. Also included are a few small areas of soils that have characteristics similar to those of the Wauberg soil except that they have a thinner, lighter colored surface layer or that the upper 4 to 8 inches of the subsurface layer is brownish sandy material. Total included areas are less than 20 percent.

This Wauberg soil has a water table that is less than 10 inches below the surface for 3 to 5 months during most years. The available water capacity is low to medium in the surface layer, very low to low in the subsurface layer, and low to medium in the subsoil. Permeability is rapid to very rapid in the sandy surface and subsurface layers and slow to very slow in the subsoil. Natural fertility is low in the sandy surface and subsurface layers and medium in the subsoil. Organic matter content is moderately low to moderate.

Wauchula sand - This nearly level, poorly drained soil is in broad areas of the flatwoods. Slopes are nearly smooth and range from 0 to 2 percent. This soil is in small and large, irregularly shaped or meandering areas that range from about 20 to 800 acres.

Typically, the surface layer is sand about 8 inches thick. The upper 5 inches is black, and the lower 3 inches is dark gray. The subsurface layer is light brownish gray sand about 6 inches thick. The upper part of the subsoil is 4 inches of dark reddish brown loamy sand, in which many sand grains have an organic coating, and 5 inches of dark brown sand. Below this is a leached layer of pale brown, mottled fine sand about 5 inches thick. The lower part of the subsoil is a loamy layer that extends to a depth of 62 inches. The upper 9 inches is gray, mottled fine sandy loam; the next 19 inches is light brownish gray, mottled loamy sand; and the lower 6 inches is light gray, mottled fine sandy loam. Between depths of 62 and 80 inches, the underlying material is light gray, mottled sandy clay loam.

Included with this soil in mapping are small areas of Mulat, Newnan, Pelham, Pomona, Riviera and Sparr soils. Also included are small areas of poorly drained soils that have a brownish stain in the subsurface layer. The sand grains are uncoated or only thinly coated. Total included areas are 15 percent or less.

The Wauchula soil has a water table that is at a depth of less than 10 inches for 1 to 4 months and is at a depth of 10 to 40 inches for about 6 months. During driest seasons, the water table recedes to a depth of more than 40 inches. The available water capacity is low to medium in the surface layer, very low to low in the subsurface layer, low to high in the upper part of the subsoil, and medium to high in the lower part. Permeability is moderately rapid-to-rapid in the surface and subsurface layers, moderate to moderately rapid in the upper part of the subsoil, and slow to moderately slow in the lower part. Natural fertility is low in the sandy surface and subsurface layers and low to medium in the subsoil. Organic matter content is low.

Weekiwachee-Durbin mucks - This complex consists of very poorly drained, well decomposed soils that contain sulfur. These soils occur along the coast at about sea level in broad, flat tidal marshes. The soil area is a transition zone between freshwater and marine water. Weekiwachee soil occurs in parts that are adjacent to mineral soils or rock outcrop. Durbin soil is mainly exposed to open water and along tidal flood channels and streams.

Weekiwachee soil typically has a surface layer of black muck that extends to a depth of 34 inches. The underlying material is gray fine sand that extends to a depth of 38 inches. The next underlying layer is white, soft limestone bedrock underlain by hard limestone bedrock.

Durbin soil has a 7-inch surface layer of very dark gray muck. The underlying layer is black muck that extends to a depth of 80 inches. Lauderhill, Okeetlanta, and Terra Ceia soils, and rock outcrop are also included in small areas of this complex. A soil similar to Weekiwachee soil occurs near inland areas. It has a sandy substratum up to 30 inches thick between the organic layers and the bedrock.

Most of the soils in this complex are flooded daily at normal high tide and all are flooded during storm tides. The organic soils remain nearly saturated between high tides. The available water capacity is very high.

The soils in this unit are not suited to urban development, cultivated crops, improved pasture, rangeland, or commercial tree production. Drainage of these soils causes extreme acidity due to the oxidation of the sulfur content.

Wekiva fine sand - This unit consists of poorly drained, shallow to moderately deep Wekiva soils. These nearly level soils are on low ridges. Typically, the surface layer is 4 inches thick and very dark gray fine sand. The subsurface layer is grayish brown fine sand to a depth of 9 inches. Below this, the subsoil is yellowish brown sandy clay loam to 18 inches and underlain by limestone bedrock.

Wulfert muck, frequently flooded - This unit consists of very poorly drained, very deep Wulfert soils. These nearly level, frequently flooded soils are on areas of tidal marsh. Typically, the surface layer is very dark brown muck, and is about 30 inches thick. The underlying material extends to beyond a depth of 80 inches. It is very dark gray mucky, loamy fine sand to a depth of about 56 inches, and very dark gray fine sand below that.

Zolfo sand - These nearly level soils are very deep and somewhat poorly drained, occurring on low ridges and knolls. The surface layer is approximately 4 inches thick and consists of very dark gray sand. The subsurface layer is approximately 71 inches deep and is composed of pale brown sand to 8 inches, gray sand to 32 inches, light gray sand to 50 inches, pale brown sand to 65 inches, and light brownish-gray sand to about 71 inches. The subsoil is composed of very dark grayish-brown, organically coated sand, and extends to depths beyond 80 inches.