

Common soils in Big Cypress National Preserve.

The Collier County, Florida area soils were revised from an earlier survey (Leighty et al 1954), and mapped in 1998 by Liudahl et al. (1998). However, Big Cypress National Preserve was not included in this survey, so that soil types listed here are those listed by Leighty et al (1954), the last soil survey that includes the Big Cypress area.

Arzell fine sand- (uncommon) Nearly level fine sand, 48 – 80 inches over limestone or marl. This soil typically supports hydric pine flatwoods communities.

Drainage (runoff): very slow

Permeability (internal drainage): rapid when water table is low

Broward fine sand, shallow phase- Nearly level fine sand, 6 – 18 inches over limestone. This soil typically supports pine flatwoods or hydric pine flatwoods communities.

Drainage (runoff): slow

Permeability (internal drainage): rapid when water table is low

Broward-Ochopee complex- (uncommon) Areas with this soil type are areas in which Broward soils (fine sands) are surrounded by Ochopee soils (calcium carbonate marl). Soils are level to nearly level to undulating, and 0 – 12 inches above limestone. The Broward soils typically support pine flatwoods or hydric pine flatwoods communities, and the Ochopee soils typically support seasonally inundated prairie communities.

Drainage (runoff): slow

Permeability (internal drainage): rapid when water table is low

Copeland fine sand, low phase- (east of SR 29) Nearly level to level fine sand with organic material, 0 – 24 inches above limestone. Areas with this soil are often inundated for many months of the year, and typically support mixed hydric communities dominated by sabal palms or bald cypress, and occasionally slash pines.

Drainage (runoff): very slow

Permeability (internal drainage): rapid when water table is low

Copeland fine sand, shallow phase- (around Deep Lake) Nearly level to level fine sand with organic material, 0 – 12 inches above limestone. Areas with this soil typically support mixed hydric communities dominated by sabal palms, hardwoods, and occasionally slash pines.

Drainage (runoff): very slow

Permeability (internal drainage): rapid when water table is low

Cypress Swamp- Nearly level soils, usually with an organic mantle on the surface; the organic (peat) layer may be thin to 12 inches or more deep; limestone is many feet beneath the soil surface. Areas with this soil typically support cypress swamp or mixed hardwood and cypress swamp communities, and are often inundated nearly year-round.

Drainage (runoff): very slow

Permeability (internal drainage): rapid when water table is low

Fresh water marsh- Level soils with an organic (peat) layer 3 – 12 on the surface, subtended by fine sand; limestone occurs 36 – 48 inches below the soil surface. These areas are inundated nearly year-round, and are dominated by fresh water marsh communities.

Drainage (runoff): very slow or ponded

Permeability (internal drainage): usually submerged

Mangrove swamp- Level, saline, coastal soils with an organic (peat) layer several inches to several feet thick, over sand, marl, or occasionally limestone. These soils typically support intertidal mangrove swamps.

Drainage (runoff): tidal

Permeability (internal drainage): tidal

Matmon loamy fine sand- Nearly level fine sand with marl, 0 – 18 inches over limestone. Areas with this soil typically support pine flatwoods or hydric pine flatwoods communities.

Drainage (runoff): medium to slow

Permeability (internal drainage): medium when water table is low

Ochopee fine sandy marl- Nearly level to depressional Nearly level to depressional sandy marl, 12 – 36 inches over limestone. Areas with this soil typically support seasonally inundated wet prairie (short grass prairie) communities.

Drainage (runoff): very slow or ponded

Permeability (internal drainage): slow

Ochopee fine sandy marl, shallow phase- Nearly level to depressional sandy marl, 6 – 12 inches over limestone. Areas with this soil typically support seasonally inundated wet prairie (short grass prairie) communities, sometimes with dwarf sycamore or slash pines.

Drainage (runoff): very slow or ponded

Permeability (internal drainage): slow

Ochopee fine sandy marl, tidal phase- Level sandy marl, 12 – 36 inches over limestone. Areas with this soil are affected occasionally by extreme tides, and typically support seasonally inundated wet prairie (short grass prairie) communities; plants tolerant of brackish conditions are common in these prairies.

Drainage (runoff): very slow or ponded

Permeability (internal drainage): slow

Ochopee marl- Level or nearly level sandy marl 12 – 36 above limestone, with a layer of fine sand between the marl and limestone. Areas with this soil typically support seasonally inundated wet prairie (short grass prairie) communities.

Drainage (runoff): very slow or ponded

Permeability (internal drainage): slow

Ochopee marl, shallow phase- Level or nearly level sandy marl 3 – 12 above limestone, with a layer of fine sand between the marl and limestone. Areas with this soil typically support seasonally inundated wet prairie (short grass prairie) communities.

Drainage (runoff): very slow or ponded

Permeability (internal drainage): slow

Rockland- Nearly level to slightly depressional fine sand or sandy marl in Tamiami limestone outcrops. Limestone is the dominant feature in these substrates, but soils occur to several feet in solution features within the limestone. Areas with this substrate typically support pine flatwoods, hydric pine flatwoods, or occasionally bald cypress communities.

Drainage (runoff): very slow or ponded

Permeability (internal drainage): slow

Tidal marsh- Level or nearly level, saline fine sand or fine sand with organic (peat) material above fine sand, all several feet above limestone. Areas with this soil are influenced by tides, and typically support salt marsh communities.

Drainage (runoff): very slow

Permeability (internal drainage): tidal

References

Leighty, R. G., M. B. Marco, G. A. Swenson, R. E. Caldwell, J. R. Henderson, O. C. Olson, and G. C. Willson Jr. 1954. Soil Survey (Detailed Reconnaissance) of Collier County, Florida. USDA Soil Conservation Service and Florida Agricultural Experiment Station. 72 pp., 8 maps.

Liudahl, K, D. J. Belz, L. Carey, R. W. Drew, S. Fisher, and R. Pale. 1998. Soil Survey of Collier County Area, Florida. USDA, NRCS and University of Florida, IFAS. 151 pp., 67 maps.