Major Land Resource Area 156A
Florida Everglades and Associated Areas

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Description

This area makes up about 7,749 square miles (20,071 square kilometers) and is entirely in Florida. It is located at the southern tip of the State and has shoreline on both the Atlantic Ocean and the Gulf of Mexico. Lake Okeechobee borders the MLRA to the north. Aside from sugar cane plantations in the north, the Everglades National Park, Big Cypress National Preserve, and the Big Cypress Seminole Indian Reservation comprise this area. Historical ditching, berming, and canals prevent natural water flow through this delicate ecosystem. To mitigate this, extensive restoration efforts have been implemented. Urban sprawl from Miami and cities to its north on the Atlantic Ridge has encroached along the eastern boundary of this area. Most of the MLRA has resisted urbanization because of a water table that is at or near the surface, a considerable acreage of unstable organic soils, and its identity as a national treasure. The MLRA area is in the Floridian Section of the Lower Coastal Plain Province of the Atlantic Plain. It is on a level, low coastal plain that has large areas of swamps and marshes. Poorly defined and broad streams, canals, and ditches drain the area to the ocean. Most of the area is flat, but in the interior, hummocks rise 3 to 6 feet (1 to 2 meters) above the general level of the landscape and low beach ridges and dunes, mainly in the eastern part of the area, rise 10 to 15 feet (3 to 5 meters) above the adjoining swamps and marshes. Elevation ranges from sea level to less than 80 feet (25 meters). The average annual precipitation is 37 to 62 inches (950 to 1,565 millimeters). About 60 percent of the precipitation occurs from June through September. The center of the area is the driest. Most of the rainfall occurs during moderate intensity, tropical storms that produce large amounts of rain from late spring through early autumn. Late autumn and winter are relatively dry. The average annual temperature is 74 to 78 degrees F (23 to 26 degrees C). The freeze-free period averages 355 days and ranges from 345 to 365 days. Five major physiographic ecological regions has been described inside of this area and act as MLRA subunits; Big Cypress Ecoregion, Everglades Ecoregion, Southern Coast and Islands Ecoregion, Miami Ridge / Atlantic Coastal Strip Ecoregion, and Coastal Marine and Estuarine Ecoregions.

Geographic subunits

Land Resource Unit 1. The Big Cypress Ecoregion, 3 to 7 m (10 to 25 ft) in elevation and include the Big Cypress National Preserve, Big Cypress and Miccosukee Reservations, and Fakahatachee Strand State Preserve. It is an area slightly higher in elevation than the Everglades, covered by pine flatwoods, open scrub cypress, prairie type grasslands, and

extensive marsh and wetlands. Poorly drained soils overlie limestone, calcareous sandstones, marls, swamp deposit mucks, and algal muds. Lakes are generally absent from the region.

Land Resource Unit 2. The Southern Coast and Islands Ecoregion, 5 m and below (17 ft and below) in elevation and includes the Ten Thousand Islands and Cape Sable, the islands of Florida Bay, and the Florida Keys. It is an area of mangrove swamps and coastal marshes, coral reefs, various coastal strand type vegetation on beach ridge deposits and limestone rock islands. Although freshwater habitats are limited or non-existent in this region, any freshwater that does occur for periods of time may have great ecological significance. Coastal rockland lakes are small and number, occurring primarily in the Florida Keys. These waters are alkaline, with high mineral content and highly variable salinity levels. The rockland lakes provide important habitat for several kinds of fish, mammals, and birds of the Keys. Reductions in the fresh groundwater lens that floats on the denser saline groundwater can severely affect these lakes.

Land Resource Unit 3. The Everglades region, 1 to 7 m (3 to 23 ft) in elevation and begins south of Lake Okeechobee to include the Everglades Agricultural Area, the water conservation areas, and the sawgrass and sloughs of the national park. The flat plain of saw-grass marshes, tree-islands, and marsh prairies, with cropland in the north, ranges in elevation from sea level to twenty feet. Peat, muck, and some clay are the main surficial materials over the limestone. Wide sloughs, marshes, and some small ponds contain most of the surface waters in this "River of Grass" region. Canals drain much of the water in some areas.

Land Resource Unit 4. The Miami Ridge/Atlantic Coastal Strip Ecoregion, sea level to 20 m (0 to 66 ft) in elevation, is a heavily urbanized region, with coastal ridges on the east and flatter terrain to the west that grades into the Everglades. The western side originally had wet and dry prairie marshes on marl and rockland and sawgrass marshes, but much of it is now covered by cropland, pasture, and suburbs. To the south, the Miami Ridge extends from near Hollywood south to Homestead and west into Long Pine Key of Everglades National Park. It is a gently rolling rock ridge of oolitic limestone that once supported more extensive southern slash pine forests and islands of tropical hardwood hammocks. The northern part of the region is a plain of pine flatwoods and wet prairie, and coastal sand ridges with scrub vegetation and sand pine. There are very few natural lakes in the region, but three types of ponded surface waters occur: 1) Pits dug deep into underlying "rock" containing water that is clear, high pH and alkaline, with moderate nutrients; 2) Shallow, surficial dug drains that are darker water; and 3) flow-through lakes (e.g., Lake Osborne) that are colored and nutrient rich.

Land Resource Unit 5. The Coastal Marine and Estuarine Ecoregion is an unofficial ecoregion, which encompasses subaqueous habitats within this MLRA. It consists of subaqueous estuarine and marine habitats which are dominated by seagrass and algal beds, coral reefs, oyster beds, and unconsolidated substrates. These areas provide important habitat for marine life which is a major economic driver in the Florida Keys and

along the Florida coast.

Ecological site keys

MLRA 156A Florida Everglades and Associated Areas

I. Landform: Terrestrial Marine Terraces

A. Ecoregion: Big Cypress

1 Dominant Drainage Class: Poorly Drained

i. Geomorphic Position: Flats, Flatwoods

a. Dominant Hydroperiod: Occasional to Frequent ponding 1 to 2 months per year with average depths 0 to 15 inches ... F156AY010FL – Subtropical Pine Flatwoods and Palmetto Prairie of Big Cypress

ii. Geomorphic Positions: Knolls, Rises

a. Dominant Hydroperiod: Rare to Occasional Flooding 1 month or less per year ... F156AY020FL – Subtropical Forested Rocklands of Big Cypress

b. Dominant Hydroperiod: Occasional to Frequent Flooding 1 to 2 months per year ... F156AY030FL – Subtropical Moist Hammocks of Big Cypress

2 Dominant Drainage Class: Very Poorly Drained

i. Geomorphic Position: Low Broad Flat

a. Dominant Hydroperiod: Occasional to Frequent Ponding 3 to 6 months per year with depths 0 to 30 inches ... R156AY040FL – Subtropical Freshwater Non-Forested Wetlands of Big Cypress

ii. Geomorphic Position: Dips, Depressions

a. Dominant Hydroperiod: Frequent Ponding 6 to 10 months per year with depths 0 to 30 inches ... F156AY050FL – Subtropical Freshwater Cypress Swamps of Big Cypress

B. Ecoregion: Southern Coast and Islands

1 Dominant Drainage Class: Very Poorly Drained

i. Geomorphic Position: Knoll, Low Broad Flat

a. Dominant Hydroperiod: Very Frequent Tidal Flooding ... R156AY110FL – Subtropical Tidal Saline Wetlands of Southern Coast and Islands

ii. Geomorphic Position: Flats

a. Dominant Hydroperiod: Occasional to Frequent Supratidal Flooding ... R156AY120FL – Subtropical Keys Tidal Rock Barrens of Southern Coast and Islands

2 Dominant Drainage Class: Poorly Drained to Moderately Well Drained

i. Geomorphic Position: Rise

a. Dominant Hydroperiod: Very Rare to Occasional Flooding 1 month or less per year ... F156AY130FL – Subtropical Forested Rocklands of Southern Coast and Islands

3 Dominant Drainage Class: Moderately Well Drained to Excessively Drained

i. Geomorphic Position: Dune, Ridge, Beach

a. Dominant Hydroperiod: Very Rare to Rare Flooding during extreme storm events ... R156AY140FL – Subtropical Coastal Zones of Southern Coast and Islands

C. Ecoregion: Everglades

1 Dominant Drainage Class: Very Poorly Drained

i. Geomorphic Position: Knolls, Islands

a. Dominant Hydroperiod: Occasional to Frequent Flooding 1 to 2 months per year ... F156AY210FL – Subtropical Freshwater Forested Wetlands of Everglades

ii. Geomorphic Position: Low Broad Flat, Dip, Depression

a. Dominant Hydroperiod: Frequent Ponding 4 to 11 months per year with depths 10 to 48 inches ... R156AY220FL – Subtropical Freshwater Non-Forested Glades Marshes and Slough Wetlands of Everglades

2 Dominant Drainage Class: Poorly Drained

i. Geomorphic Position: Flat

a. Dominant Hydroperiod: Occasional to Frequent ponding 2 to 4 months per year with depths 0 to 30 inches ... R156AY230FL – Subtropical Marl Prairies of Everglades

D. Ecoregion: Miami Ridge / Atlantic Coastal Strip

1 Dominant Drainage Class: Very Poorly Drained to Poorly Drained

i. Geomorphic Position: Knoll, Low Broad Flat

a. Dominant Hydroperiod: Very Frequent Tidal Flooding ... R156AY310FL – Subtropical Tidal Saline Wetlands of Miami Ridge/ Atlantic Coastal Strip

b. Dominant Hydroperiod: Occasional to Frequent Ponding 3 to 6 months per year with depths 0 to 30 inches ... R156AY320FL – Subtropical Freshwater Non-Forested Wetlands of Miami Ridge/ Atlantic Coastal Strip

ii. Geomorphic Position: Dips, Depressions

a. Dominant Hydroperiod: Frequent Ponding 6 to 10 months per year with depths 0 to 30 inches ... F156AY330FL – Subtropical Freshwater Cypress Swamps of Miami Ridge / Atlantic Coastal Strip

2 Dominant Drainage Class: Poorly Drained to Somewhat Poorly Drained

i. Geomorphic Position: Flats, Flatwoods, Drainageways

a. Dominant Hydroperiod: Occasional to Frequent Ponding 1 to 2 months per year ... F156AY340FL – Subtropical Pine Flatwoods and Palmetto Prairie of Miami Ridge / Atlantic Coastal Strip

ii. Geomorphic Position: Knolls, Rises

a. Dominant Hydrology: Occasional to Frequent Ponding 1 month or less per year with depths 0 to 10 inches ... F156AY350FL – Subtropical Forested Rocklands of Miami Ridge / Atlantic Coastal Strip

b. Dominant Hydroperiod: Rare to Frequent Flooding 1 to 2 months per year ... F156AY360FL – Subtropical Moist Hammocks of Miami Ridge / Atlantic Coastal Strip

3 Dominant Drainage Class: Somewhat Poorly to Moderately Well Drained

i. Geomorphic Position: Dune, Beach, Ridge

a. Dominant Hydroperiod: Very rare to rare flooding during extreme storm events ... R156AY370FL – Subtropical Coastal Zones of Miami Ridge / Atlantic Coastal Strip

ii. Geomorphic Position: Knoll, Rise

a. Dominant Hydroperiod: Very Rare Flooding less than one month per year ... F156AY380FL – Subtropical Hardwood Hammocks of Miami Ridge / Atlantic Coastal Strip

4 Dominant Drainage Class: Moderately Well Drained to Well Drained

i. Geomorphic Position: Rise, Ridge, Dune

a. Dominant Hydroperiod: None under natural conditions ... F156AY390FL – Subtropical Scrub of Miami Ridge / Atlantic Coastal Strip

II. Landform: Subaqueous Marine Terraces

A. Ecoregion: Coastal Marine and Estuarine

1 Dominant Drainage Class: Subaqueous

i. Geomorphic Position: Barrier Cove, Estuarine Tidal Stream, Flood Tidal Delta Flat, Lagoon Bottom, Submerged Wave Cut Bottom, Washover Fan Flat, Dredged Channel

a. Dominant Hydroperiod: Free water above the soil surface is permanent and/or there is a positive water potential at the soil surface more than 21 hours per day ... R156AY500FL – Subaqueous Haline Estuarine Habitats of MLRA 156A

ii. Geomorphic Position: Continental Shelf

a. Dominant Hydroperiod: Free water is at the surface permanently ... R156AY550FL – Subaqueous Haline Marine Habitats of MLRA 156A