

Map Unit Properties Table

Age	Map Unit (Symbol)	Unit Description	Erosion Resistance	Suitability for Development	Hazards	Paleontologic Resources	Cultural Resources	Mineral Occurrence	Habitat	Recreation	Significance
HOLOCENE	Holocene sediments (Qh).	Sediments include quartz sand, carbonate sand, mud, organic material, peat, and shell fragments; typically present near the coastline at elevations less than 1.5 m (5 ft).	Very low	Unit is ubiquitous in South Florida; very permeable and unstable if undercut or undermined by karst dissolution.	If high clay content, unit may be very slippery and mucky when saturated with water.	Freshwater mollusks and shell fragments, plant debris, roots, and pollen.	Land- use evolution studies, Native American settlement sites.	None documented.	Surficial unconsolidated unit supports coastline habitat, including mangrove zones.	If mud content is high, avoid visitor use when ground is saturated.	Records Holocene coastal changes in South Florida, including recent anthropogenic alterations.
PLEISTOCENE - HOLOCENE	Pleistocene–Holocene undifferentiated (Qu).	Undifferentiated siliciclastic sediments (light gray, tan to black, clean to clayey with silt lenses), organic material (plant debris, roots, peat), and freshwater carbonate sand and mud (marl—commonly buff colored to tan and fossiliferous with sand, silt, clay, and organic matter); differentiated where deposits exceed 6.1 m (20 ft) in thickness (not at Big Cypress National Preserve).	Very low	Unit is ubiquitous on land surface in South Florida; very permeable and unstable if thick and undercut or undermined by karst dissolution.	If clay content is high, unit may be very slippery and mucky when saturated with water; karst dissolution may be highly irregular and make for poor footing.	Freshwater mollusks, plant debris, roots, and logs.	Land- use evolution studies, Native American settlement sites.	None documented.	Surficial unconsolidated unit supports wetland and grassland species; may support terraphytes in muddy areas.	If mud content is high, avoid visitor use when ground is saturated.	Records Pleistocene to Holocene transition in South Florida.
PLEISTOCENE	Miami Limestone (Qm).	Unit consists of two facies: an oolitic facies (white to orangish- gray, poorly to moderately indurated, sandy, oolitic limestone) and a bryozoan facies (white to orangish- gray, poorly indurated to well- indurated, sandy limestone); some quartz sandstone beds present.	Low to moderate.	Unit is highly porous and permeable and forms much of Biscayne aquifer system; susceptible to karst processes; unsuitable for waste- treatment facilities.	Sinkhole and solution-hole collapse probable in this unit; high permeability lets contaminants pass through quickly.	Scattered fossils, including a bryozoan zone, mollusks, and corals. Casts and molds are common.	None documented.	Oolite, bryozoan layers.	Solution holes support tree islands and copepods.	Commonly forms irregular surfaces with solution holes; avoid for most visitor facilities.	Oolite and bryozoan facies record shoreline to lagoonal paleo- environments.
TERTIARY-QUATERNARY	Shell- bearing sediments (TQsu).	Highly fossiliferous unit, equivalent to the informal Okeechobee unit, which is subdivided into the latest Pliocene- early Pleistocene Caloosahatchee Formation, early Pleistocene Bermont Formation (informal), and late Pleistocene Fort Thompson Formation, all fossiliferous sandstones and carbonates. Unit contains variably calcareous and fossiliferous quartz sandstone, and sandy limestone with some clayey sandstone and sandy clay present in lenses. Unit is biostratigraphically differentiated.	Low to moderate.	Unit is highly porous and permeable and forms much of surficial aquifer system; susceptible to karst processes; unsuitable for waste- treatment facilities.	Heterogeneity of unit may make it unstable underfoot; carbonate dissolution may form hazardous solution holes.	Marine fossils	Fossil shells may have provided early trade material.	Fossil shells	Supports cypress swamps and grasslands.	Geologic complexity and dissolution may yield irregular surfaces; avoid for most visitor facilities.	Fossil record differentiates biostrati- graphically different ages within Tertiary in South Florida.
TERTIARY	Tamiami Formation (Tt).	Mixed carbonate and siliciclastic layers containing several members, including an oyster facies, a sandstone facies, several marl and limestone layers, and a reefal member. Unit includes light gray to tan, fossiliferous sandstone; greenish, sandy clay; calcareous, gray sandstone; sandy, fossiliferous limestone; and white to light- gray, well- indurated, fossiliferous, sandy limestone. Some packstone and pelecypod sandstone members are present locally.	Low to moderate.	Variably highly permeable to impermeable layers form a complex aquifer system, some of which is exposed as part of the surficial aquifer system. Lower beds form part of the intermediate, confined aquifer system.	Carbonate- rich layers are susceptible to collapse of sinkholes and solution holes. Contaminants pass quickly through dissolution voids.	Molds & casts; fossils include: barnacles, coral, echinoids, foraminifera, calcareous nannoplankton, pelecypods, gastropods, serpulids, and ostracodes.	May have provided material for early trade.	Fossils; phosphate present as sand- to gravel- size grains	Supports cypress forests and wetland flora.	If highly dissolved, solution holes may present hazard to visitors.	Type section is present in Big Cypress National Preserve; records Pliocene lagoonal and reefal paleo- environments.