

Common Name	Scientific Name	Habitat Description	Likelihood of Occurrence	Federal Status	State Status
<b>Reptiles</b>					
Blue-tailed Mole Skink	<i>Plestiodon egregius lividus</i>	Bluetail mole skinks need loose sand for burrowing, so they inhabit sandhill and xeric hammocks, oak and sand pine scrubs, and turkey oak barrens in Florida.	Low	T	FT
Eastern Indigo Snake	<i>Drymarchon couperi</i>	Scrub, sandhill, wet prairies, and mangrove swamps, and needs large tracts of land to persist. This species spends winters in gopher tortoise ( <i>Gopherus polyphemus</i> ) burrows in sandy uplands and forages in more hydric habitats in the northern part of the range.	Low	T	FT
Florida Sand Skink	<i>Neoseps reynoldsi</i>	Sand skinks ( <i>Neoseps reynoldsi</i> ) and bluetail mole skinks ( <i>Eumeces egregius lividus</i> ) are found in interior peninsular Florida. Both species are most commonly associated with habitat dominated by xeric vegetation such as oak-dominated scrub, turkey oak barrens, high pine, and xeric hammocks. Skinks typically occur in habitats that contain a mosaic of open sandy patches interspersed with forbs, shrubs and trees.	Low	T	FT
<b>Plants</b>					
Florida Bonamia	<i>Bonamia grandiflora</i>	Occurs in Florida scrub habitat on deep, dry, white sand in clearings among sand pines ( <i>Pinus clausa</i> ) and other scrub flora.	Low	T	E
Pygmy Fringe Tree	<i>Chionanthus pygmaeus</i>	Generally found on xeric white and yellow sand of scrub, sandhill, and xeric hammocks found at the southern end of the Central Florida Ridge.	Low	E	E
Pigeon Wings	<i>Clitoria fragrans</i>	Undisturbed clearings of xeric sandhill and scrub communities on well-drained upland soils.	Low	T	-
Short-leaved Rosemary	<i>Conradina brevifolia</i>	White sands of sand pine-oak scrub	Low	E	-
Scrub Mint	<i>Dicerandra frutescens</i>	Habitat is scrub and sandhills.	Low	E	-

Common Name	Scientific Name	Habitat Description	Likelihood of Occurrence	Federal Status	State Status
Scrub Buckwheat	<i>Eriogonum floridanum</i>	Dry pinelands, sandhills, and scrub (longleaf pine-turkey oak, scrub oaks). More commonly found in transition habitats between scrub and high pine and in turkey oak barrens.	Low	T	E
Highlands Scrub Hypericum	<i>Hypericum cumulicola</i>	Patches of open, nutrient-poor sand within oak and rosemary scrub.	Low	E	-
Scrub Blazingstar	<i>Liatris ohlingerae</i>	Openings in oak-rosemary scrub, sand pine scrub.	Low	E	-
Britton's Beargrass	<i>Nolina brittoniana</i>	Deep, fine-textured, well-drained sands of sand pine-evergreen oak scrub or longleaf pine-turkey oak sandhill.	Low	E	E
Paper Nailwort	<i>Paronychia chartacea</i>	Sand scrub of ancient dunes, in pure, white sand clearings or blowouts.	Low	T	E
Lewton's Polygala	<i>Polygala lewtonii</i>	Sandhills characterized by longleaf pine and low scrub oaks, including low turkey oak woods, and transitional sandhill/scrub habitats that are fire maintained. This species occasionally inhabits powerline clearings or new roadsides.	Low	E	E
Florida jointweed	<i>Polygonella basiramia</i>	Restricted to bare patches within sand pine-evergreen oak scrub vegetation.	Low	E	E
Sandlace	<i>Polygonella myriophylla</i>	Sand pine scrub and ancient sand dunes.	Low	E	-
Florida Willow	<i>Salix floridana</i>	Wet mucky soils in bottomland forests, floodplains, hydric hammocks, swamps, edges of spring-runs, and streams.	Low	UR	E
Carter's warea	<i>Warea carteri</i>	Known from sandy clearings in several open, pine-dominated ecosystems including sand scrub, sandhills, and pine rockland within scattered overstories of pines (sand, longleaf, or slash pine) and scrub oaks.	Low	E	E

Common Name	Scientific Name	Habitat Description	Likelihood of Occurrence	Federal Status	State Status
Florida Ziziphus	<i>Ziziphus celata</i>	Restricted to yellow sands in xeric upland habitats: sandhills and Florida scrub including pasturelands.	Low	E	-
<b>Insects</b>					
Monarch Butterfly	<i>Danaus plexippus</i>	Early successional habitat that contains milkweed species ( <i>Asclepias</i> spp.)	Moderate	C	-

#### Federal Status:

**Endangered (E)**, Any species which is in danger of extinction throughout all or a significant portion of its range, is protected by the take prohibitions of Section 9 under the ESA.

**Threatened (T)**, Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range, is protected by the take prohibitions of Section 9, consistent with any protective regulations finalized under section 4(d) of the ESA.

**Candidate (C)**, Any species for which the USFWS has sufficient information on its biological status and threats to propose it as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities, is not protected by the take prohibitions of Section 9 of the ESA.

**Under Review (UR)**, Any species which is currently under review for protection under the ESA.

## 4.2 USFWS Consultation Areas

An evaluation was completed to identify the potential occurrence of any federal or state listed protected species and associated critical habitats which have the potential to occur within the study area. This review identified that the study area is located within the USFWS consultation area for six protected species listed in **Table 5** below. Based on a review of the habitat types within the study area and the consultation areas identified by the USFWS, species-specific surveys were not required as suitable habitat to support these species was not present within the study area. The project is anticipated to have no effect on these species.

**Table 5: USFWS Consultation Area Species**

Common Name	Scientific Name	Protection Status (USFWS)
Bluetail Mole Skink	<i>Eumeces egregius lividus</i>	Threatened
Crested Caracara	<i>Caracara cheriway</i>	Threatened
Everglades Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	Endangered
Florida Grasshopper Sparrow	<i>Ammodramus savannarum floridanus</i>	Endangered
Florida Scrub Jay	<i>Aphelocoma coerulescens</i>	Threatened
Florida Sand Skink	<i>Neoseps reynoldsi</i>	Threatened

## 4.3 State Listed Species

The desktop evaluation identified 19 additional state protected species with the potential to occur in the study area. This includes one mammal, six birds, one reptile, one amphibian, and 10 plants (**Table 6**).

The FWC has the authority to regulate and manage the species, listed in Rule 68A-27.0031, Florida Administrative Code (F.A.C.). State-protected species are identified in the Florida Endangered and Threatened Species List (Rule 68A-27.003, F.A.C.) or the Species of Special Concern list (Rule 68A-27.005, F.A.C.). Additionally, the State lists of plants, which are designated Endangered, Threatened, and Commercially Exploited, are administered and maintained by the Florida Department of Agriculture and Consumer Services (DOACS) via Chapter 5B-40, F.A.C.

**Table 6: State Listed Species**

Common Name	Scientific Name	Habitat	Likelihood of Occurrence	State Status
<b>Mammals</b>				
Florida black bear	<i>Ursus americanus floridanus</i>	Black bears prefer habitats with dense understories such as forested wetlands and uplands but will use a variety of habitats depending on the season.	Low	CR
<b>Birds</b>				
American Kestrel	<i>Falco sparverius paulus</i>	American kestrels nest in cavities that they do not excavate. Instead, they must depend on woodpeckers and natural processes to create holes in trees. Kestrels nest predominantly in dead but standing longleaf pine trees, called snags, usually in the abandoned cavities of pileated woodpeckers. The Southeastern American kestrel's habitat in Florida includes open woodlands, sandhill, and fire-maintained savannah pine habitats.	Moderate	ST
Florida Sandhill Crane	<i>Antigone canadensis pratensis</i>	Sandhill crane nests are built by both mates with grass, moss, and sticks.	High	ST
Florida Burrowing Owl	<i>Athene cunicularia floridana</i>	Burrowing owls inhabit open prairies in Florida that have very little understory vegetation. The drainage of wetlands, although detrimental to many organisms, increases the areas of habitat for the burrowing owl. The range of the burrowing owl is throughout the peninsular of Florida in patches and localized areas.	Moderate	ST
Roseate Spoonbill	<i>Platalea ajaja</i>	Mangrove islands and occasionally dredge-spoil islands are the preferred nesting habitat for the species. In Florida, the species is found in Florida Bay, Tampa Bay, and Brevard County.	High	ST
Little Blue Heron	<i>Egretta caerulea</i>	Little blue herons inhabit fresh, salt, and brackish water environments in Florida including swamps, estuaries, ponds, lakes, and rivers.	High	ST
Reddish Egret	<i>Egretta rufescens</i>	Reddish egrets inhabit coastal areas, mainly on estuaries near mangroves, and lagoons, but they can also be found on dredge spoiled islands.	Low	ST
Tricolored Heron	<i>Egretta tricolor</i>	Tricolored herons inhabit fresh and saltwater marshes, estuaries, mangrove swamps, lagoons, and river deltas.	High	ST



Common Name	Scientific Name	Habitat	Likelihood of Occurrence	State Status
<b>Reptiles</b>				
Gopher Tortoise	<i>Gopherus polyphemus</i>	Gopher tortoises are long-lived reptiles that occupy upland habitat throughout Florida including forests, pastures, and yards. They dig deep burrows for shelter and forage on low-growing plants. Gopher tortoises share these burrows with more than 350 other species and are therefore referred to as a keystone species.	Low	ST
<b>Amphibians</b>				
Gopher Frog	<i>Lithobates capito</i>	Upland habitats such as longleaf pine, xeric oak, and sandhills but they can also be found in upland pine forest, scrub, xeric hammock, mesic and scrubby flatwoods, dry prairie, and mixed hardwood-pine communities.	Low	DL
<b>Plants</b>				
Many-flowered Grass-pink	<i>Calopogon multiflorus</i>	Can be found in dry to moist flatwoods with wiregrass, longleaf pine, and saw palmetto. Its habitat also includes mesic pine savannahs on flat or gently sloping terrain.	Low	T
Chapman's sedge	<i>Carex chapmanii</i>	A tussock-forming species. Wet, sandy, acidic soils, sometimes over limestone, under deciduous or mixed deciduous-evergreen forests, hammocks.	Low	T
Sand Butterfly Pea	<i>Centrosema arenicola</i>	Open areas in slash pine-turkey oak sandhills and scrubby flatwoods.	Low	E
Ashe's Savory	<i>Clinopodium ashei</i>	Most commonly found in openings in sand pine scrub, but also can be found in disturbed areas such as fire lanes, road shoulders, and abandoned fields.	Low	T
Cutthroatgrass	<i>Coleataenia abscissa</i>	Grows only on moisture-receiving seepy slopes on the sandy eastern and	Low	E

		western slopes of the Lake Wales Ridge.		
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Common Name	Scientific Name	Habitat	Likelihood of Occurrence	State Status
Nodding Pinweed	<i>Lechea cernua</i>	Always found in deep sands, usually ancient dunes, on which the most common forest is a mixture of evergreen scrub oaks.	Low	T
Florida Spiny-pod	<i>Matelea floridana</i>	Upland hardwood forests, with laurel oak, red oak, pignut or mockernut hickory, spruce, pine, and southern magnolia. A variety of wooded habitats from fairly moist woods, such as those in limesink areas, to dry, open oak-hickory or oak-hickory-pine upland forests.	Low	E
Celestial Lily	<i>Nemastylis floridana</i>	Low sunny areas in wet flatwoods, swamp, and marsh borders. Also, in wet, grassy, sandy peat clearings in slash pine-saw palmetto vegetation, and cabbage palm hammocks.	Low	E
Florida Beargrass	<i>Nolina atopocarpa</i>	Wet pine flatwoods; deeply rooted in black, sandy-peaty high hydroperiod soil; fire tolerant and probably fire dependent.	Low	T
Redmargin Zephyrlily	<i>Zephyranthes simpsonii</i>	Found on black, highly organic sands of wet pine flatwoods, meadows, pastures, roadsides, and glade borders.	Low	T

#### State Status

**ST**, State population listed as Threatened by the FWC  
**DL**, Delisted  
**CR**, Conservation Rule 68A-4.009, F.A.C.

#### Plants

**E**, Endangered  
**T**, Threatened

## 4.4 Migratory Bird Treaty Act

The MBTA requires the protection of migratory birds by prohibiting take of birds, feathers, eggs, and nests. Actions must be taken to avoid or minimize impacts to migratory birds and to prevent or abate the detrimental alteration of the environment for the benefit of migratory birds under the terms of a valid permit issued pursuant to Federal regulations by the USFWS. Typically, if active nests of bird species protected by the MBTA are identified, the USFWS recommends avoiding tree clearing or nest removal until at least the peak of the nesting season (generally March through August) has passed or until the nest is abandoned.

There are lakes, wetlands, canals, and undeveloped forested areas which provide suitable habitat for many species protected under the MBTA. **Table 7** below provides a list of the migratory birds with the potential to utilize the study area and their associated breeding season period as shown in the USFWS IPaC Report. These periods are critical for migratory bird reproduction.

**Table 7: Migratory Bird Species**

Common Name Scientific Name	Status Federal, State	Breeding Season*
American Kestrel, <i>Falco sparverius paulus</i>	State-designated threatened	Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i>	Delisted, BGEPA	Sep 1 to Jul 31
Black Skimmer <i>Rynchops niger</i>	Not listed	May 20 to Sep 15
Chimney Swift <i>Chaetura pelagica</i>	Not listed	Mar 15 to Aug 25
Great Blue Heron <i>Ardea herodias occidentalis</i>	Not listed	Jan 1 to Dec 31
King Rail <i>Rallus elegans</i>	Not listed	May 1 to Sep 5
Lesser Yellowlegs <i>Tringa flavipes</i>	Not listed	Breeds elsewhere
Magnificent Frigatebird <i>Fregata magnificens</i>	Not listed	Oct 1 to Apr 30
Painted Bunting <i>Passerina ciris</i>	Not listed	Apr 25 to Aug 15
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i>	Not listed	May 10 to Sep 10
Swallow-tailed Kite <i>Elanoides forficatus</i>	Not listed	Mar 10 to Jun 30

\*Breeding Seasons were provided by the IPaC located in **Appendix E. IPaC**

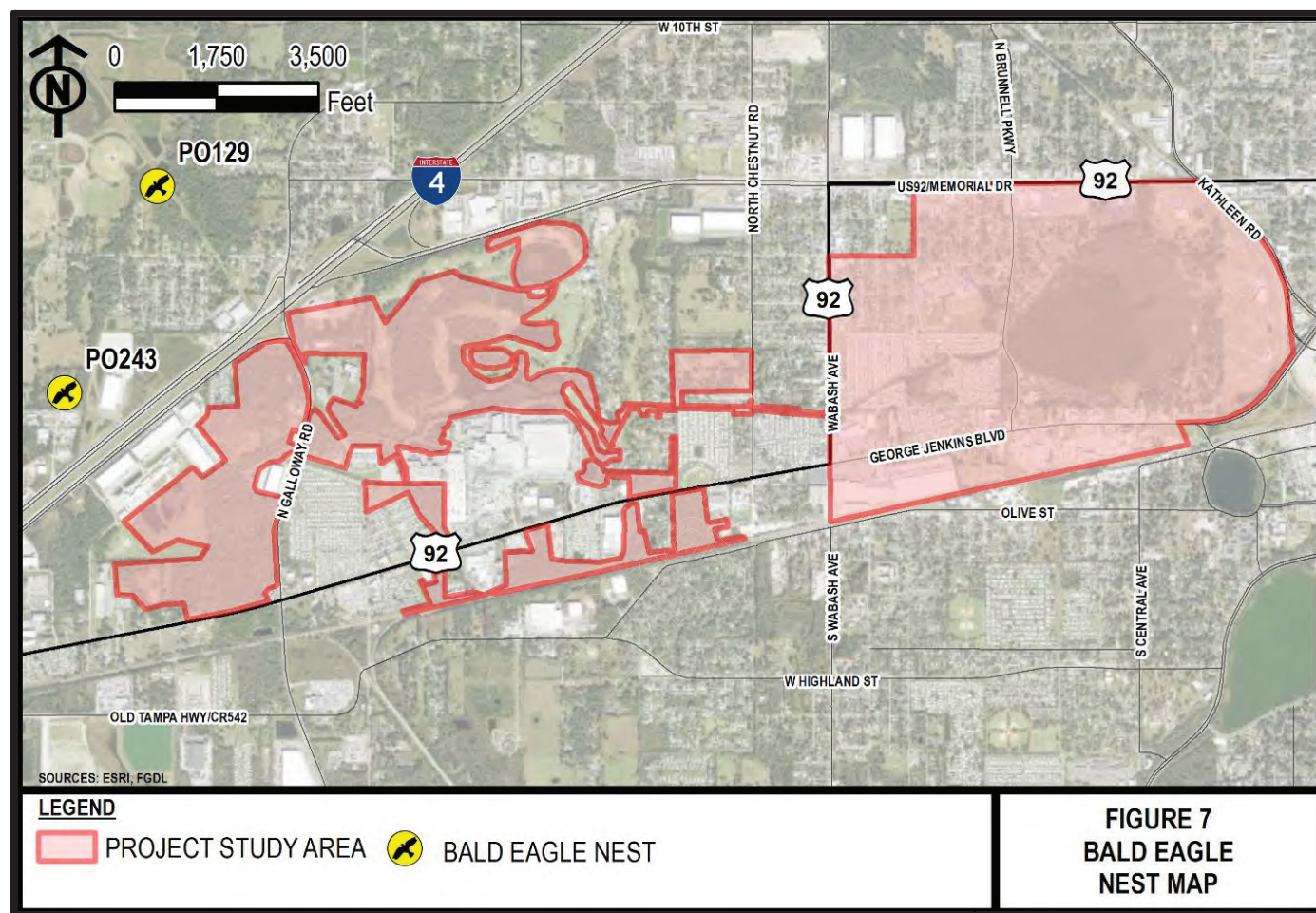
#### 4.5 Bald Eagle and Golden Eagle Protection Act

The BGEPA (16 U.S.C. 668-668c) was enacted in 1940, which prohibits, except under certain specified conditions, the take, possession, and commerce of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*), including their parts (i.e., feathers), nests, or eggs. The BGEPA defines “take” of an eagle as to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb,” and further defines “disturb” as “to agitate or bother a bald or golden eagle to a degree that causes or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior,” (50 CFR 22.6). The act includes protections for previously used nests during any time when the eagles are not present if as a result of human-induced alterations, upon the eagle’s return, such alterations disturb the eagle to such a level that interferes with or interrupts its normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

Bald eagles were observed flying overhead and perched at multiple locations throughout the study area. The large open-water lakes within the study area provide suitable habitat for bald eagles. Drones were used to inspect an area where an eagle was observed perched. However, eagle nests were not observed during the survey. The FWC Eagle Nest Locator online database was utilized to identify any recorded bald eagles nesting nearby. Two known bald eagle nests were identified within one mile of the study area with the closest nest located approximately 0.75 miles to the northwest (**Figure 7**). Based on the field survey and review of bald eagle nesting data, the proposed project is anticipated to have no effect to the bald eagle. Additional details are provided in **Table 8** below:

**Table 8: Bald and Golden Eagle Protection Act**

Common Name Scientific Name	Status Fed, State	Habitat	Species Presence/Absence
Bald Eagle, <i>Haliaeetus leucocephalus</i>	BGEPA	Rivers, lakes, marshes, estuaries, reservoirs, and some seacoasts, and the surrounding forested areas; tall trees; can be found in drier areas further from the water, including farmland and urban and suburban habitat.	Present



**Figure 7: Bald Eagle Nest Map**

## 5. Field Investigation Findings

### 5.1 Wetlands

A total of 18 wetlands (including three wetland “islands”) were found to exist (**Figure 8 – Wetland Delineation**). **Table 9** below provides a summary of the wetlands identified including the feature name, feature type, FLUCFCS classification and NWI classification. Wetland Determination Data Form – Atlantic and Gulf Coastal Plain Region forms were completed in the field and utilized to document the characteristics of each wetland. The Wetland Data Forms are provided within **Appendix B**. Detailed descriptions of each wetland identifying dominant vegetation, soil conditions and hydrologic indicators are provided within **Appendix F**.

**Table 9: Wetlands Identified and Delineated**

ID/Name	Feature Type	FLUCFCS Code	NWI Code
W01	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3Cd
W02	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3Cd
W03	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3Cd
W04	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C
W05	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C
W06	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C
W07	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3E
W08	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3E
W09	Herbaceous Wetland	640 (Vegetated Non-Forested Wetlands)	PEM1D
W10	Herbaceous Wetland	640 (Vegetated Non-Forested Wetlands)	PEM1D
W11	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1E
W12	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C
W13	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3Ch
W14	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C
W15	Forested Wetland	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C
I01	Wetland Island	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C
I02	Wetland Island	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C
I03	Wetland Island	615 (Stream and Lake Swamps (Bottomland))	PFO1/3C



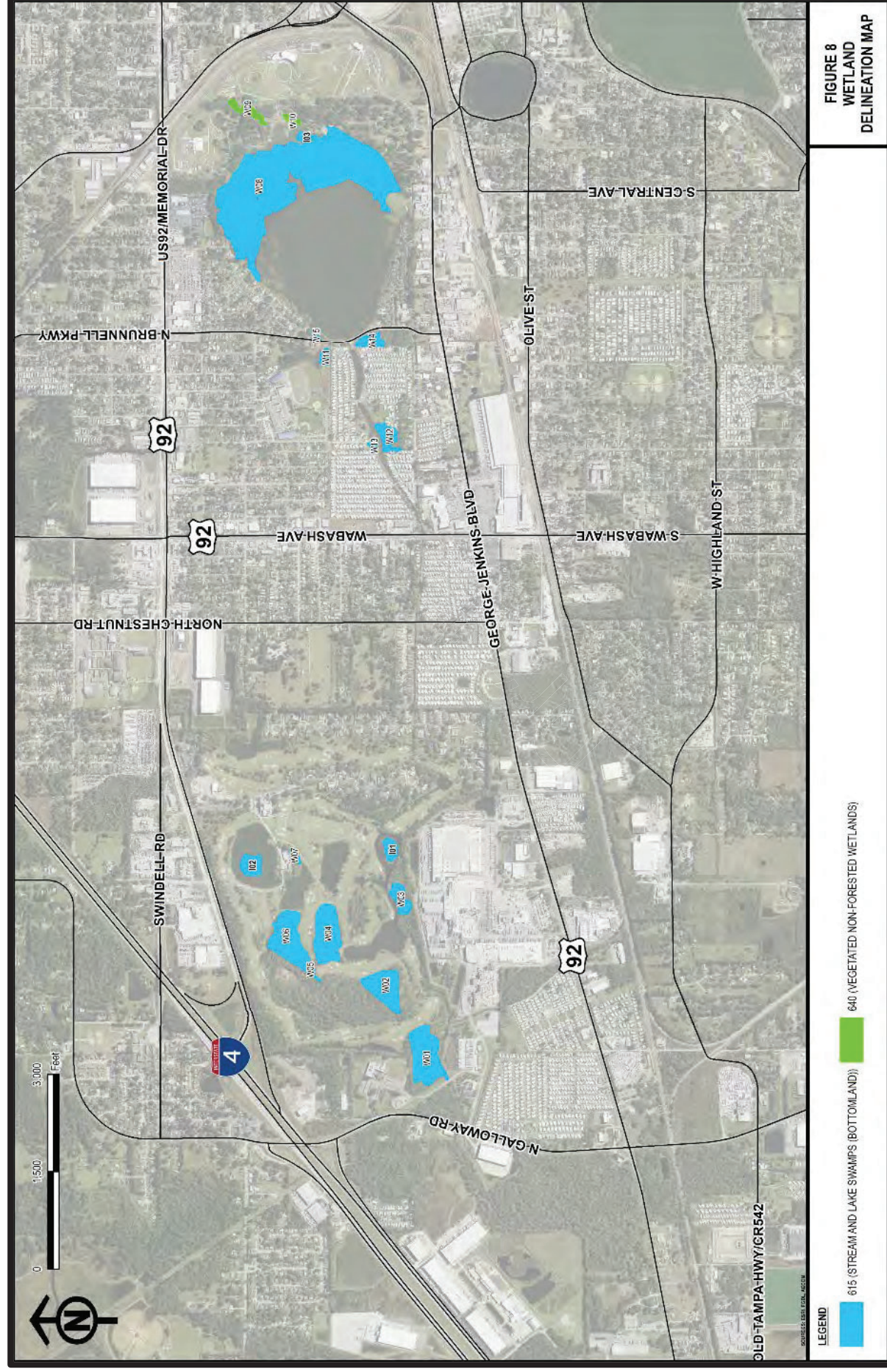


Figure 8: Wetland Delineation Map

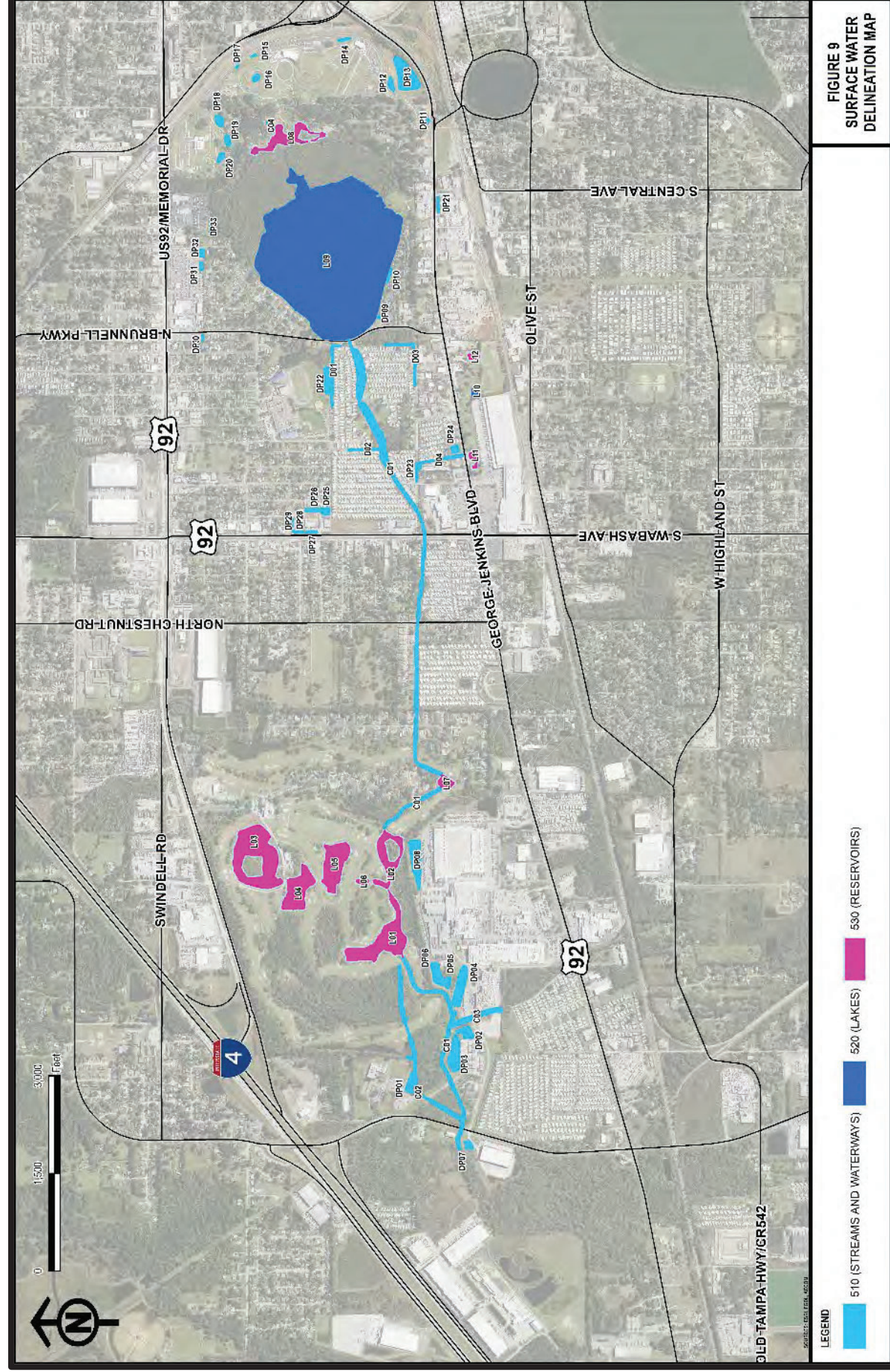
## 5.2 Surface Waters

A total of four channelized watercourses (canals), 12 lakes, 33 stormwater retention/detentions features, and four wet ditches were found (**Figure 9 – Surface Water Delineation**). **Table 10** below provides a summary of the surface waters including the feature name, feature type, FLUCFCS classification and NWI classification. Detailed descriptions of each surface water identifying dominant vegetation, soil conditions and hydrologic indicators, as relevant, are provided within **Appendix G**.

**Table 10: Surface Waters Identified and Delineated**

Name	Feature Type	FLUCFCS Code	NWI Code
C01	Canal	510 (Streams and Waterways)	R2UBHx
C02	Canal	510 (Streams and Waterways)	R2UBFx
C03	Canal	510 (Streams and Waterways)	R2UBHx
C04	Canal	510 (Streams and Waterways)	R2UBFx
L01-L08	Lake	530 (Reservoirs)	PUBHx
L09	Lake	520 (Lakes)	L1UBH
L10	Lake	520 (Lakes)	PUBHx
L11-L12	Lake	530 (Reservoirs)	PUBHx
DP01-DP33	Stormwater Retention/Detention	530 (Reservoirs)	PUB/AB/EM/SS/FO x/h
D01-D04	Wet Ditches	510 (Streams and Waterways)	PUB/EMx







### 5.3 Upland Communities

The majority of the upland communities within the study area have been altered by man. These areas included urban development with various man-made structures, paving (parking lots, streets, sidewalk, etc.), and landscaping. The undeveloped upland communities identified within the study area include Improved Pasture, and Hardwood - Conifer Mixed (**Figure 5**). The developed upland communities include Residential, Commercial and Services, Industrial, Institutional, Recreational, and Transportation. Brief descriptions of the natural upland areas are provided below:

**Crop and Pastureland: 210.** This area was a fenced pasture actively utilized for grazing cattle. It was comprised of closely cropped grasses with individual trees and stands of trees comprised of live oak (*Quercus virginiana*), water oak (*Quercus nigra*), laurel oak (*Quercus laurifolia*), slash pine (*Pinus elliottii*), and camphortree (*Camphora officinarum*).

**Mixed Hardwoods: 434.** Non-wetland forested communities in which no single species is dominant in the canopy. Common tree species consisted of live oak (*Quercus virginiana*), water oak (*Quercus nigra*), laurel oak (*Quercus laurifolia*), American elm (*Ulmus americana*), sugarberry (*Celtis laevigata*), cabbage palm (*Sabal palmetto*), camphortree (*Camphora officinarum*), and slash pine (*Pinus elliotti*). Other common species included Brazilian pepper (*Schinus terebinthifolia*), muscadine (*Vitis rotundifolia*), eastern poison ivy (*Toxicodendron radicans*), golden rain tree (*Koelreuteria elegans*), air-potato (*Dioscorea bulbifera*), white mulberry (*Morus alba*), peppervine (*Nekemias arborea*), wax myrtle (*Morella cerifera*), red maple (*Acer rubrum*), paper mulberry (*Broussonetia papyrifera*), sword fern (*Nephrolepis* sp.), wild coffee (*Psychotria nervosa*), and Chinese tallowtree (*Triadica sebifera*).

### 5.4 Listed Species Observed

AECOM field teams conducted surveys for protected wildlife and plants occurring within the study from March 18-21, 2024. The focus of this assessment was to document any direct or indirect observations of federal and state-listed species and associated suitable habitat. **Table 11** below provides a summary of the protected species observed within the study area and its associated protection status/agency.

Protected plants species were not identified within the study area during the survey. The majority of protected plant species identified with a potential to exist are upland sandhill/scrub species. Scrub habitat was not identified within the study area validating the lack of presence for protected plant species.

**Table 11: Listed Species Observed**

Common Name	Scientific Name	Protection Status	Protection Agency or Regulation
Wood Stork	<i>Mycteria americana</i>	Threatened	USFWS
Florida Sandhill Crane	<i>Antigone canadensis pratensis</i>	Threatened	FWC
Roseate Spoonbill	<i>Platalea ajaja</i>	Threatened	FWC
Little Blue Heron	<i>Egretta caerulea</i>	Threatened	FWC
Tricolored Heron	<i>Egretta tricolor</i>	Threatened	FWC
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Not listed	BGEPA, 16 U.S.C. 668-668d
Great Blue Heron	<i>Ardea herodias occidentalis</i>	Not listed	MBTA, 16 U.S.C. 703-711
Swallow-tailed kite	<i>Elanoides forficatus</i>	Not listed	MBTA, 16 U.S.C. 703-711
Lesser yellowlegs	<i>Tringa flavipes</i>	Not listed	MBTA, 16 U.S.C. 703-711

Two wading bird rookeries were identified within the study area (**Table 12**). A wood stork rookery was identified on Island I-02 within the northern-most lake on the Lone Palm Golf Club property (Lake George) (approximate coordinates: Lat. 28.051041, Long. -82.005847). This rookery has been documented by the USFWS as active since 2003. Hundreds of wood storks were observed nesting within this protected island along with many other species of wading birds including roseate spoonbill, white ibis, and others. The total number of nests is estimated to be approximately between 40-60. A great blue heron rookery was identified on Island I-01 within the southern-most lake within the Lone Palm Golf Club property (Lake Charels) (approximate coordinates: Lat. 28.045193, Long. -82.004635). Please see **Figure 10** showing the locations of the two observed wading bird rookeries.

**Table 12: Bird Rookeries Observed**

Species Nesting	Location	Lat	Long
Wood Stork, Roseate Spoonbill	I-02 (Lake George)	28.051041	-82.005847
Great Blue Heron	I-01	28.045193	-82.004635

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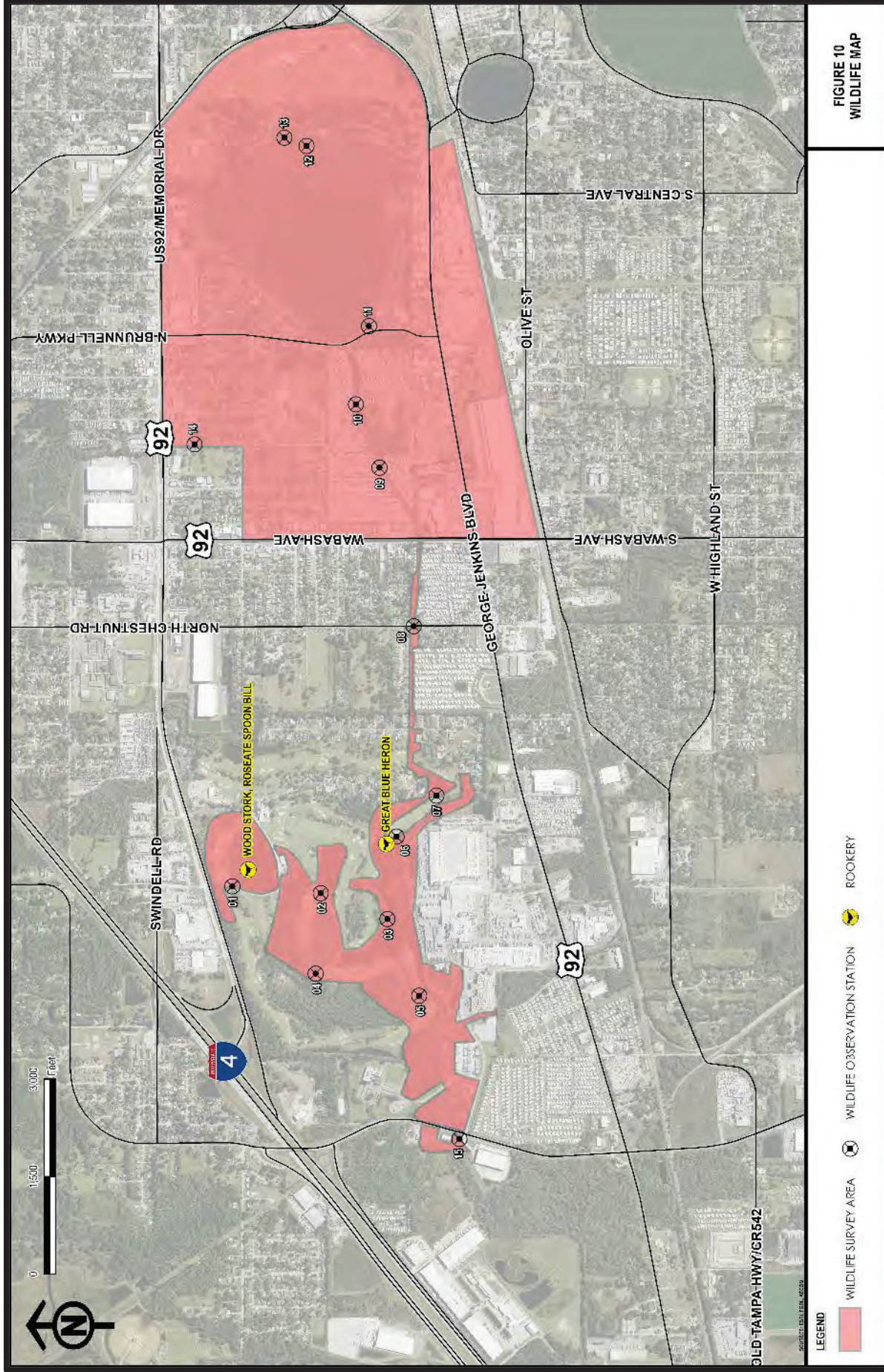


Figure 10: Wildlife Map



## 6. Conclusions and Recommendations

This BA Report prepared by AECOM for the Lake Bonnet Drainage Basin Flood Hazard and Debris Mitigation Project in the City of Lakeland, Florida, aimed to identify wetlands and surface waters, evaluate habitat suitability for protected species, characterize habitats, and provide data for minimizing environmental impacts during the design phase of the project.

A total of 18 wetlands, four channelized watercourses, 12 lakes, 33 stormwater features, and four wet ditches were identified, delineated, and characterized within the study area (**Section 6.1-6.2, Tables 9 and 10**). Impacts on wetlands and surface waters will require authorization from relevant agencies, with specific requirements to be determined once the preferred project alternative is selected.

The evaluation for federal and state listed species revealed the presence of nine protected species observed during field surveys (**Section 6.4, Table 11**). Two wading bird rookeries were identified within the study area. A wood stork rookery was identified on Island I-02 within the northern-most lake on the Lone Palm Golf Club property (Lake George) (approximate coordinates: Lat. 28.051041, Long. -82.005847). This rookery has been documented by the USFWS as active since 2003. Hundreds of wood storks were observed nesting within this protected island along with many other species of wading birds including roseate spoonbill, white ibis, and others. The total number of nests is estimated to be approximately between 40-60. A great blue heron rookery was identified on Island I-01 within the southern-most lake within the Lone Palm Golf Club property (Lake Charels) (approximate coordinates: Lat. 28.045193, Long. -82.004635). Potential impacts to protected species will be addressed during the design and permitting phase of the project through agency coordination/consultation efforts.

### 6.1 Anticipated Permitting Requirements

At this time the preferred alternative for this project has not been selected. A Feasibility Study is currently underway, which will be followed by a NEPA Study to select the preferred design alternative. Once the preferred alternative has been selected, a final review of permitting requirements will be completed.

Based on limited information available at the time this report was developed, it can be assumed that impacts to wetlands will occur in the form of dredging and filling. The following environmental permit-related regulations apply to the project:

**Clean Water Act, Section 404 and 401.** Section 404 of the Clean Water Act (CWA) requires authorization from the USACE for the discharge of dredged or fill material into any Waters of the U.S., including wetlands. As such, the CWA would generally apply to actions that result in temporary or permanent impacts to wetlands and surface waters.

Section 404(b)(1) *Guidelines for Specification of Disposal Sites for Dredged or Fill Material*, outlines the criteria used to evaluate discharges of dredged or fill material into Waters of the U.S., including wetlands, under Section 404 of the CWA. A fundamental principle of Section 404(b)(1) states dredged or fill material should not be discharged into wetlands and other waters unless it can be demonstrated that the discharge will not have unacceptable adverse impacts on those waters. Section 404(b)(1) also requires the following determinations: (1) the project is the least environmentally damaging practicable alternative, (2) the project will not cause or contribute to the violation of applicable state or federal laws, such as water quality standards or the ESA, (3) the project will not result in significant degradation of Waters of the U.S, and (4) any appropriate and practicable steps have been taken to minimize the adverse impacts of the project on wetlands.

Under Section 401 of the CWA, a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into Waters if the U.S. unless a Section 401 Water Quality Certification (WQC) is issued, or certification is waived. In Florida, WQC is accomplished through the State's permitting process, described below.

**The Endangered Species Act of 1973.** The ESA, as amended (16 U.S. Code [U.S.C.] 1532 et. seq.), provides designation and protection of endangered and threatened species and their critical habitat. An endangered species is a species in danger of extinction throughout all, or a significant portion, of its range. A threatened species will likely become endangered within the foreseeable future throughout all, or a significant portion, of its range. Critical habitat as defined by the ESA is a specific geographic area with physical and/or biological features that are essential for the conservation of endangered and threatened species and may require special management considerations or protection. If a project has the potential to affect a federally listed species, or their habitat, consultation with USFWS will be required prior to permit approval.

Section 7(a)(2) of the ESA requires federal agencies to ensure that any action authorized is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. The USACE will typically initiate informal or formal consultation with USFWS, as needed to obtain concurrence of ESA effect determinations. The extent of impacts to protected species or their habitat will determine whether the consultation can be accomplished through the informal process or will require formal consultation.

**Section 106 of the National Historic Preservation Act of 1966.** Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to consider the impacts of their undertakings on historic properties and archeological resources. The Florida State Historic Preservation Office (SHPO), through the Florida Division of Historical Resources (FDHR), is the state agency that identifies and protects historic buildings, districts, structures, and archaeological sites in the state of Florida. Consultation with SHPO will occur during the USACE and state permitting process.

**Southwest Florida Water Management District (SWFWMD).** The State of Florida (Florida) also regulates impacts to surface waters, wetlands, and state-listed threatened or endangered species.

The SWFWMD regulates environmental resources, habitat, and state-listed species within State Waters Under Chapter 62-330, F.A.C. and Part IV of Chapter 373, F.S., The Environmental Resource Permitting (ERP) Program regulates activities in, on or over surface waters or wetlands, as well as any activity involving the alteration of surface water flows. The SWFWMD will review direct, secondary, and cumulative project impacts. Any impacts to natural resources that cannot be eliminated, or reduced to the greatest extent practicable, will require mitigation. Application to the SWFWMD is made through the submittal of the Statewide Environmental Resource Permit (SWERP) application and can be done electronically. Typically, the application is accompanied by a narrative similar to that prepared for the federal permit that includes details associated with the identification of resources within the project area, elimination and reduction of impacts, quantification of unavoidable impacts, compensatory mitigation, and best management practices to minimize impacts during construction as needed. Under the State's process, activities in wetlands or surface waters also triggers consultation with the FDHR.

**City of Lakeland.** The City of Lakeland regulates impacts to upland trees per Chapter 38-1, Environment (Code 1960, § 26.06). These laws are intended to preserve the city's natural beauty and maintain a healthy environment. A Tree Removal Permit is required to cut down any tree over 5 inches in diameter including diseased, damaged, or standing dead trees known as snags. The City of Lakeland also has special protection for trees of specific species, age and size known as heritage trees. These trees include:

- Live Oaks: Valued for their longevity and broad-spreading crowns
- Southern Magnolias: Provide shade and beauty with their large, fragrant white flowers and glossy green leaves
- Bald Cypressess: Known for their unique water-loving nature and importance to local ecosystems
- Eastern Red Cedars: Provide important habitats for wildlife and serve as windbreaks with their dense, evergreen foliage

A Tree Removal Permit may be required from the City of Lakeland. Once a preferred alternative is selected, impacts to upland trees will be quantified and a determination will be made if a tree removal permit is needed.

## 6.2 Limitations

The information presented is based on observations and technical information available on the dates of the desktop and on-site field surveys. This report is for general planning purposes only. The limits of any on-site wetlands/surface waters can only be determined and verified through field delineation and must be reviewed by the pertinent regulatory agencies. The wildlife surveys conducted within the study area do not preclude the potential for any additional listed species not listed herein from inhabiting the site in the future.

AECOM Technical Services, Inc.  
110 East Broward Blvd, Suite 700  
Fort Lauderdale, FL 33301

## APPENDIX A: WEB SOIL SURVEY REPORT





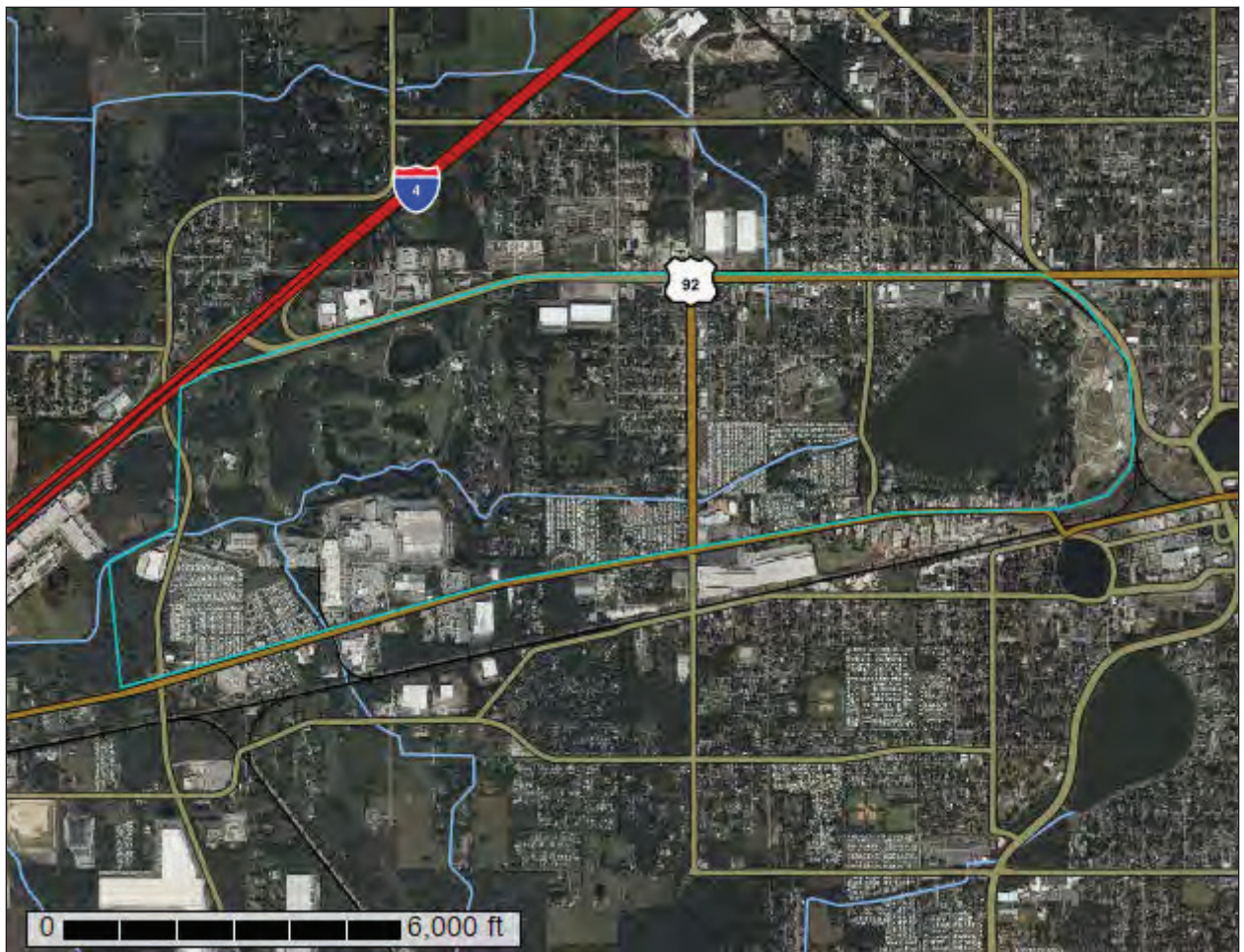
United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Polk County, Florida**



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil



scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

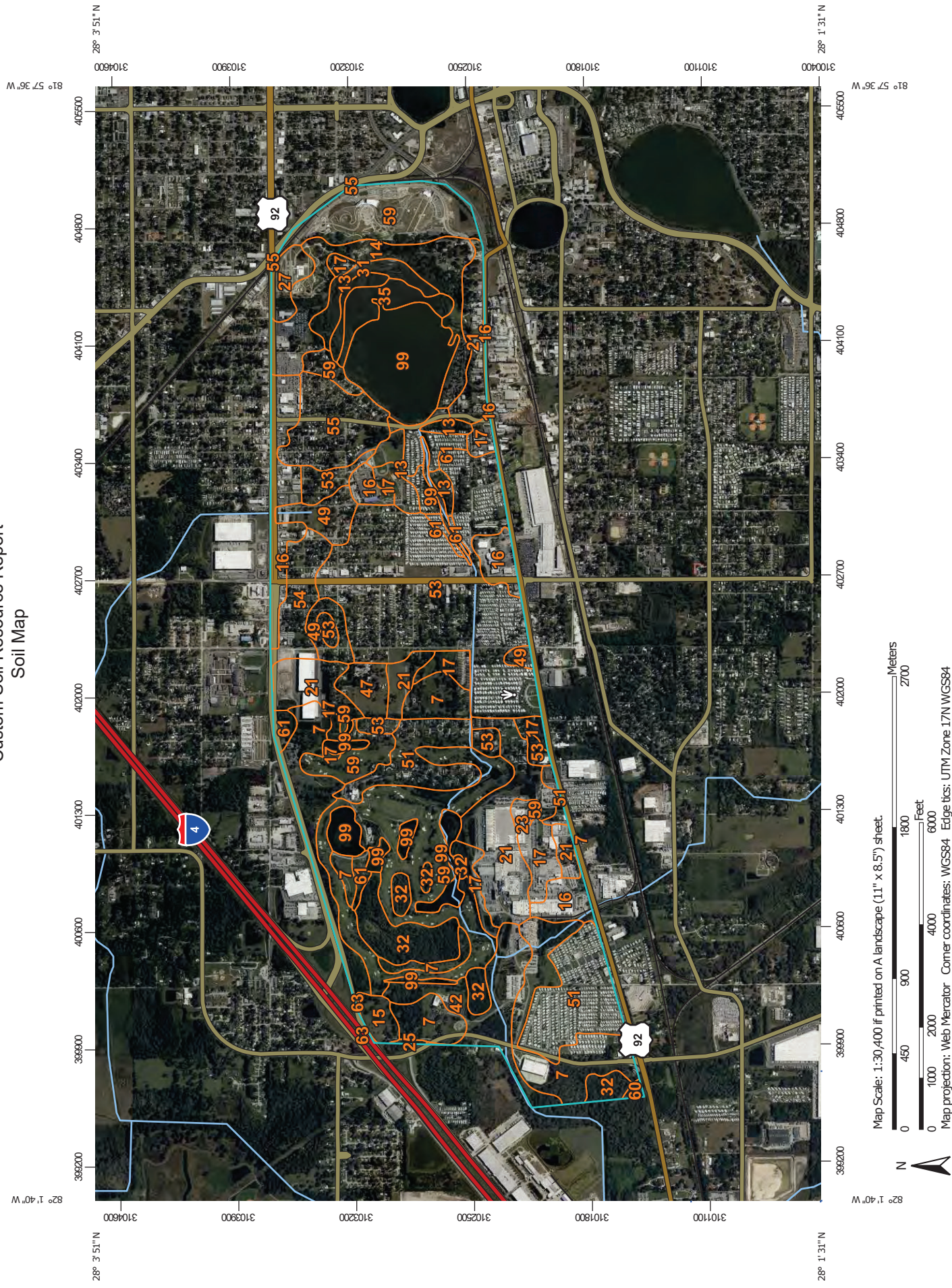
# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



# Custom Soil Resource Report Soil Map



MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

**Special Point Features**

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Florida  
Survey Area Data: Version 21, Sep 6, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 6, 2022—Mar 21, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Pomona fine sand	189.0	10.0%
13	Samsula muck, frequently ponded, 0 to 1 percent slopes	34.8	1.9%
14	Sparr sand, 0 to 5 percent slopes	90.2	4.8%
15	Tavares fine sand, 0 to 5 percent slopes	12.8	0.7%
16	Urban land, 0 to 2 percent slopes	94.3	5.0%
17	Smyrna and Myakka fine sands	72.8	3.9%
21	Immokalee sand	167.4	8.9%
23	Ona-Ona, wet, fine sand, 0 to 2 percent slopes	1.3	0.1%
25	Placid and Myakka fine sands, depressional	1.2	0.1%
27	Kendrick fine sand, 0 to 5 percent slopes	17.7	0.9%
31	Adamsville fine sand, 0 to 2 percent slopes	21.6	1.1%
32	Kaliga muck, frequently ponded, 0 to 1 percent slopes	67.9	3.6%
35	Hontoon muck, frequently ponded, 0 to 1 percent slopes	26.1	1.4%
42	Felda fine sand	61.4	3.3%
47	Zolfo fine sand, 0 to 2 percent slopes	19.6	1.0%
49	Adamsville-Urban land complex	41.5	2.2%
51	Pomona-Urban land complex	127.3	6.8%
53	Myakka-Immokalee-Urban land complex	302.7	16.1%
54	Pomello-Urban land complex	38.1	2.0%
55	Sparr-Urban land complex, 0 to 5 percent slopes	62.0	3.3%
59	Arents-Urban land complex, 0 to 5 percent slopes	263.3	14.0%
60	Arents, sandy	2.1	0.1%
61	Arents, organic substratum-Urban land complex	35.2	1.9%
63	Tavares-Urban land complex	0.7	0.0%
99	Water	131.2	7.0%
<b>Totals for Area of Interest</b>		<b>1,882.2</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas

shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Polk County, Florida

### 7—Pomona fine sand

#### Map Unit Setting

*National map unit symbol:* 1jttq  
*Elevation:* 20 to 120 feet  
*Mean annual precipitation:* 46 to 54 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Pomona, non-hydric, and similar soils:* 70 percent  
*Pomona, hydric, and similar soils:* 20 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Pomona, Non-hydric

##### Setting

*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Sandy and loamy marine deposits

##### Typical profile

*A - 0 to 6 inches:* fine sand  
*E - 6 to 21 inches:* sand  
*Bh - 21 to 26 inches:* fine sand  
*E' - 26 to 48 inches:* fine sand  
*Btg - 48 to 73 inches:* fine sandy loam  
*Cg - 73 to 80 inches:* loamy sand

##### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.20 to 1.98 in/hr)  
*Depth to water table:* About 6 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 5.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

## Custom Soil Resource Report

*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

### Description of Pomona, Hydric

#### Setting

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy and loamy marine deposits

#### Typical profile

*A - 0 to 6 inches:* fine sand

*E - 6 to 21 inches:* sand

*Bh - 21 to 26 inches:* fine sand

*E' - 26 to 48 inches:* fine sand

*Btg - 48 to 73 inches:* fine sandy loam

*Cg - 73 to 80 inches:* loamy sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Runoff class:* High

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)

*Depth to water table:* About 0 to 12 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 5.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4w

*Hydrologic Soil Group:* A/D

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* Yes

### Minor Components

#### Myakka

*Percent of map unit:* 4 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

## Custom Soil Resource Report

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

### **Smyrna, non-hydric**

*Percent of map unit:* 3 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

### **Wauchula, non-hydric**

*Percent of map unit:* 3 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY130FL - Sandy over Loamy Flatwoods and Hammocks

*Other vegetative classification:* Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

## **13—Samsula muck, frequently ponded, 0 to 1 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2tzw9

*Elevation:* 0 to 250 feet

*Mean annual precipitation:* 44 to 63 inches

*Mean annual air temperature:* 68 to 77 degrees F

*Frost-free period:* 335 to 365 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Samsula and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Samsula**

#### **Setting**

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Parent material:* Herbaceous organic material over sandy marine deposits



**Typical profile**

*Oa1 - 0 to 24 inches:* muck  
*Oa2 - 24 to 32 inches:* muck  
*Cg1 - 32 to 35 inches:* sand  
*Cg2 - 35 to 44 inches:* sand  
*Cg3 - 44 to 80 inches:* sand

**Properties and qualities**

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Very poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* About 0 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* Frequent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Very high (about 13.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7w  
*Hydrologic Soil Group:* A/D  
*Ecological site:* R155XY100FL - Organic Freshwater Isolated Marshes and Swamps  
*Forage suitability group:* Organic soils in depressions and on flood plains (G155XB645FL)  
*Other vegetative classification:* Organic soils in depressions and on flood plains (G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)  
*Hydric soil rating:* Yes

**Minor Components**

**Myakka**

*Percent of map unit:* 3 percent  
*Landform:* Depressions on marine terraces  
*Landform position (three-dimensional):* Tread, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps  
*Other vegetative classification:* Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL), Freshwater Marshes and Ponds (R155XY010FL)  
*Hydric soil rating:* Yes

**Kaliga**

*Percent of map unit:* 3 percent  
*Landform:* Depressions on flatwoods on marine terraces  
*Landform position (three-dimensional):* Tread, dip, talf  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Ecological site:* R155XY100FL - Organic Freshwater Isolated Marshes and Swamps

## Custom Soil Resource Report

*Other vegetative classification:* Organic soils in depressions and on flood plains (G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)

*Hydric soil rating:* Yes

### **Basinger**

*Percent of map unit:* 3 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

*Hydric soil rating:* Yes

### **Anclote**

*Percent of map unit:* 2 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Convex, concave

*Across-slope shape:* Linear, concave

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)

*Hydric soil rating:* Yes

### **Floridana**

*Percent of map unit:* 2 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear

*Ecological site:* R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL), Freshwater Marshes and Ponds (R155XY010FL)

*Hydric soil rating:* Yes

### **Sanibel**

*Percent of map unit:* 2 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Linear, concave

*Across-slope shape:* Concave

*Ecological site:* R155XY100FL - Organic Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Organic soils in depressions and on flood plains (G155XB645FL)

*Hydric soil rating:* Yes

## 14—Sparr sand, 0 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* 2w0q9  
*Elevation:* 40 to 150 feet  
*Mean annual precipitation:* 44 to 56 inches  
*Mean annual air temperature:* 68 to 77 degrees F  
*Frost-free period:* 290 to 365 days  
*Farmland classification:* Farmland of unique importance

### Map Unit Composition

*Sparr and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Sparr

#### Setting

*Landform:* Knolls on marine terraces, rises on marine terraces  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Interfluve, tread, rise  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Convex, linear  
*Parent material:* Sandy marine deposits and/or loamy marine deposits

#### Typical profile

*A - 0 to 8 inches:* sand  
*E - 8 to 57 inches:* sand  
*Bt - 57 to 80 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat poorly drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* About 18 to 42 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 4.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* A/D  
*Forage suitability group:* Sandy soils on rises and knolls of mesic uplands (G154XB131FL)

## Custom Soil Resource Report

*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands (G154XB131FL), Upland Hardwood Hammock (R154XY008FL)  
*Hydric soil rating:* No

### Minor Components

#### Tavares

*Percent of map unit:* 5 percent  
*Landform:* Flats on marine terraces, knolls on marine terraces, ridges on marine terraces  
*Landform position (two-dimensional):* Backslope, shoulder  
*Landform position (three-dimensional):* Base slope, interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Other vegetative classification:* Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)  
*Hydric soil rating:* No

#### Apopka

*Percent of map unit:* 5 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope, interfluve, tread  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Convex, linear  
*Other vegetative classification:* Sandy soils on ridges and dunes of xeric uplands (G154XB111FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL), Upland Hardwood Hammock (R154XY008FL)  
*Hydric soil rating:* No

#### Candler

*Percent of map unit:* 5 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope, interfluve, tread  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Other vegetative classification:* Sandy soils on ridges and dunes of xeric uplands (G154XB111FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)  
*Hydric soil rating:* No

## 15—Tavares fine sand, 0 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* 2w0pz  
*Elevation:* 30 to 160 feet  
*Mean annual precipitation:* 44 to 56 inches  
*Mean annual air temperature:* 68 to 75 degrees F  
*Frost-free period:* 290 to 365 days  
*Farmland classification:* Farmland of unique importance

### Map Unit Composition

*Tavares and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Tavares

#### Setting

*Landform:* Knolls on marine terraces, ridges on marine terraces

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Interfluve, side slope, tread, rise

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear

*Parent material:* Eolian or sandy marine deposits

#### Typical profile

*A - 0 to 5 inches:* fine sand

*C - 5 to 80 inches:* fine sand

#### Properties and qualities

*Slope:* 0 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Runoff class:* Negligible

*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)

*Depth to water table:* About 42 to 60 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Very low (about 2.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3s

*Hydrologic Soil Group:* A

*Forage suitability group:* Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)

*Other vegetative classification:* Longleaf Pine-Turkey Oak Hills (R154XY002FL),  
Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)

*Hydric soil rating:* No

### Minor Components

#### Candler

*Percent of map unit:* 5 percent

*Landform:* Knolls on marine terraces, ridges on marine terraces

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve, tread

*Down-slope shape:* Linear, convex

*Across-slope shape:* Linear, convex, concave

*Other vegetative classification:* Sandy soils on ridges and dunes of xeric uplands (G154XB111FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)

*Hydric soil rating:* No

**Apopka**

*Percent of map unit:* 4 percent

*Landform:* Ridges on marine terraces, knolls on marine terraces

*Landform position (two-dimensional):* Summit, shoulder, footslope

*Landform position (three-dimensional):* Crest, side slope, nose slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Other vegetative classification:* Sandy soils on ridges and dunes of xeric uplands  
(G154XB111FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)

*Hydric soil rating:* No

**Zolfo**

*Percent of map unit:* 3 percent

*Landform:* Knolls on marine terraces, rises on marine terraces

*Landform position (three-dimensional):* Interfluve, rise

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear

*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands  
(G155XB131FL), North Florida Flatwoods (R154XY004FL)

*Hydric soil rating:* No

**Narcoossee**

*Percent of map unit:* 3 percent

*Landform:* Knolls on marine terraces, rises on marine terraces

*Landform position (three-dimensional):* Interfluve, rise

*Down-slope shape:* Linear, convex

*Across-slope shape:* Linear

*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands  
(G155XB131FL), Upland Hardwood Hammock (R154XY008FL)

*Hydric soil rating:* No

**16—Urban land, 0 to 2 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2x9fc

*Elevation:* 0 to 200 feet

*Mean annual precipitation:* 40 to 68 inches

*Mean annual air temperature:* 68 to 79 degrees F

*Frost-free period:* 345 to 365 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Urban land:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Urban Land

### Setting

*Landform:* Flatwoods on marine terraces, rises on marine terraces, knolls on marine terraces, ridges on marine terraces, hills on marine terraces  
*Landform position (two-dimensional):* Summit, backslope  
*Landform position (three-dimensional):* Interfluvium, side slope, riser, talus, rise  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear  
*Parent material:* No parent material

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Forage suitability group:* Forage suitability group not assigned (G155XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G155XB999FL)  
*Hydric soil rating:* Unranked

## Minor Components

### Matlacha

*Percent of map unit:* 3 percent  
*Landform:* Flats on marine terraces  
*Landform position (three-dimensional):* Tread, talus  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Forage suitability group not assigned (G155XB999FL)  
*Hydric soil rating:* No

### St. augustine

*Percent of map unit:* 3 percent  
*Landform:* Marine terraces  
*Landform position (three-dimensional):* Tread, rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Other vegetative classification:* Forage suitability group not assigned (G155XB999FL)  
*Hydric soil rating:* No

### Immokalee

*Percent of map unit:* 1 percent  
*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Riser, talus  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)  
*Hydric soil rating:* No

### Adamsville

*Percent of map unit:* 1 percent  
*Landform:* Knolls on marine terraces, rises on marine terraces  
*Landform position (three-dimensional):* Tread, rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear



## Custom Soil Resource Report

*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Upland Hardwood Hammock (R155XY008FL)  
*Hydric soil rating:* No

### **Paola**

*Percent of map unit:* 1 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (two-dimensional):* Backslope, summit  
*Landform position (three-dimensional):* Side slope, interfluvium, riser  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Sandy soils on ridges and dunes of xeric uplands (G155XB111FL), Sand Pine Scrub (R155XY001FL)  
*Hydric soil rating:* No

### **Myakka**

*Percent of map unit:* 1 percent  
*Landform:* Drainageways on flatwoods on marine terraces  
*Landform position (three-dimensional):* Tread, talus, dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear, concave  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)  
*Hydric soil rating:* No

### **Pomello**

*Percent of map unit:* 1 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (two-dimensional):* Backslope, summit  
*Landform position (three-dimensional):* Side slope, interfluvium, riser  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)  
*Hydric soil rating:* No

### **Apopka**

*Percent of map unit:* 1 percent  
*Landform:* Ridges on marine terraces, hills on marine terraces  
*Landform position (two-dimensional):* Summit, backslope  
*Landform position (three-dimensional):* Interfluvium, side slope, riser  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Other vegetative classification:* Sandy soils on ridges and dunes of xeric uplands (G155XB111FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL)  
*Hydric soil rating:* No

### **Cypress lake**

*Percent of map unit:* 1 percent  
*Landform:* Drainageways on marine terraces, flats on marine terraces  
*Landform position (three-dimensional):* Tread, dip, talus  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Concave, linear  
*Other vegetative classification:* Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), South Florida Flatwoods (R155XY003FL)  
*Hydric soil rating:* Yes

**Eaugallie**

*Percent of map unit:* 1 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Tread, talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

*Hydric soil rating:* No

**Brynwood**

*Percent of map unit:* 1 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Tread, talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)

*Hydric soil rating:* Yes

**17—Smyrna and Myakka fine sands**

**Map Unit Setting**

*National map unit symbol:* 1jtv1

*Elevation:* 20 to 260 feet

*Mean annual precipitation:* 46 to 54 inches

*Mean annual air temperature:* 70 to 77 degrees F

*Frost-free period:* 350 to 365 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Smyrna, non-hydric, and similar soils:* 41 percent

*Myakka and similar soils:* 39 percent

*Smyrna, hydric, and similar soils:* 15 percent

*Minor components:* 5 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Smyrna, Non-hydric**

**Setting**

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy marine deposits

**Typical profile**

*A - 0 to 4 inches:* fine sand

*E - 4 to 12 inches:* fine sand

*Bh - 12 to 25 inches:* fine sand

## Custom Soil Resource Report

*E'* - 25 to 42 inches: fine sand  
*B'h* - 42 to 48 inches: fine sand  
*C* - 48 to 80 inches: fine sand

### Properties and qualities

*Slope*: 0 to 2 percent  
*Depth to restrictive feature*: More than 80 inches  
*Drainage class*: Poorly drained  
*Runoff class*: High  
*Capacity of the most limiting layer to transmit water (Ksat)*: Moderately high to high (0.57 to 5.95 in/hr)  
*Depth to water table*: About 6 to 18 inches  
*Frequency of flooding*: None  
*Frequency of ponding*: None  
*Maximum salinity*: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum*: 4.0  
*Available water supply, 0 to 60 inches*: Low (about 4.9 inches)

### Interpretive groups

*Land capability classification (irrigated)*: None specified  
*Land capability classification (nonirrigated)*: 4w  
*Hydrologic Soil Group*: A/D  
*Ecological site*: F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group*: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)  
*Other vegetative classification*: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)  
*Hydric soil rating*: No

## Description of Myakka

### Setting

*Landform*: Flatwoods on marine terraces  
*Landform position (three-dimensional)*: Talf  
*Down-slope shape*: Convex  
*Across-slope shape*: Linear  
*Parent material*: Sandy marine deposits

### Typical profile

*A* - 0 to 7 inches: fine sand  
*E* - 7 to 25 inches: fine sand  
*Bh* - 25 to 36 inches: fine sand  
*C* - 36 to 80 inches: fine sand

### Properties and qualities

*Slope*: 0 to 2 percent  
*Depth to restrictive feature*: More than 80 inches  
*Drainage class*: Poorly drained  
*Runoff class*: High  
*Capacity of the most limiting layer to transmit water (Ksat)*: Moderately high to high (0.57 to 5.95 in/hr)  
*Depth to water table*: About 6 to 18 inches  
*Frequency of flooding*: None  
*Frequency of ponding*: None  
*Maximum salinity*: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum*: 4.0  
*Available water supply, 0 to 60 inches*: Low (about 5.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)  
*Hydric soil rating:* No

**Description of Smyrna, Hydric**

**Setting**

*Landform:* Flats on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy marine deposits

**Typical profile**

*A - 0 to 4 inches:* fine sand  
*E - 4 to 12 inches:* fine sand  
*Bh - 12 to 25 inches:* fine sand  
*E' - 25 to 42 inches:* fine sand  
*B'h - 42 to 48 inches:* fine sand  
*C - 48 to 80 inches:* fine sand

**Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 5.95 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)  
*Hydric soil rating:* Yes



## Minor Components

### Basinger

*Percent of map unit:* 2 percent

*Landform:* Drainageways on marine terraces

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G154XB141FL), Slough (R154XY011FL)

*Hydric soil rating:* Yes

### Pomona, non-hydric

*Percent of map unit:* 1 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

### Ona, non-hydric

*Percent of map unit:* 1 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

### Immokalee, non-hydric

*Percent of map unit:* 1 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

## 21—Immokalee sand

### Map Unit Setting

*National map unit symbol:* 1jtv4

*Elevation:* 50 to 260 feet

*Mean annual precipitation:* 46 to 54 inches

*Mean annual air temperature:* 70 to 77 degrees F

*Frost-free period:* 350 to 365 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Immokalee, non-hydric, and similar soils:* 75 percent

*Immokalee, hydric, and similar soils:* 10 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Immokalee, Non-hydric

#### Setting

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy marine deposits

#### Typical profile

*A - 0 to 7 inches:* sand

*E - 7 to 39 inches:* sand

*Bh - 39 to 58 inches:* sand

*E' - 58 to 66 inches:* sand

*B'h - 66 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Runoff class:* High

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* About 6 to 18 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)  
*Hydric soil rating:* No

**Description of Immokalee, Hydric**

**Setting**

*Landform:* Flats on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Parent material:* Sandy marine deposits

**Typical profile**

*A - 0 to 7 inches:* sand  
*E - 7 to 39 inches:* sand  
*Bh - 39 to 58 inches:* sand  
*E' - 58 to 66 inches:* sand  
*B'h - 66 to 80 inches:* sand

**Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)  
*Hydric soil rating:* Yes

**Minor Components**

**Basinger**

*Percent of map unit:* 5 percent

## Custom Soil Resource Report

*Landform:* Drainageways on marine terraces

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G154XB141FL), Slough (R154XY011FL)

*Hydric soil rating:* Yes

### **Smyrna, non-hydric**

*Percent of map unit:* 5 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

### **Myakka**

*Percent of map unit:* 5 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

## **23—Ona-Ona, wet, fine sand, 0 to 2 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2w4gx

*Elevation:* 10 to 130 feet

*Mean annual precipitation:* 46 to 56 inches

*Mean annual air temperature:* 66 to 77 degrees F

*Frost-free period:* 325 to 365 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Ona and similar soils:* 75 percent

*Ona, wet, and similar soils:* 12 percent

*Minor components:* 13 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*



## Description of Ona

### Setting

*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy marine deposits

### Typical profile

*A - 0 to 9 inches:* fine sand  
*Bh - 9 to 16 inches:* fine sand  
*C - 16 to 80 inches:* fine sand

### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* About 6 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 4.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)  
*Hydric soil rating:* No

## Description of Ona, Wet

### Setting

*Landform:* Sloughs on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy marine deposits

### Typical profile

*A - 0 to 9 inches:* fine sand  
*Bh - 9 to 16 inches:* fine sand  
*C - 16 to 80 inches:* fine sand

### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained

## Custom Soil Resource Report

*Runoff class:* High

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* About 0 to 18 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 4.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* B/D

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands  
(G155XB141FL)

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G155XB141FL)

*Hydric soil rating:* Yes

### Minor Components

#### Myakka

*Percent of map unit:* 5 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Tread, talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G155XB141FL), South Florida Flatwoods (R155XY003FL)

*Hydric soil rating:* No

#### Basinger, hydric

*Percent of map unit:* 4 percent

*Landform:* Drainageways on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G155XB141FL), Slough (R155XY011FL)

*Hydric soil rating:* Yes

#### Immokalee

*Percent of map unit:* 4 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Tread, talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G155XB141FL), South Florida Flatwoods (R155XY003FL)

*Hydric soil rating:* No

## 25—Placid and Myakka fine sands, depressional

### Map Unit Setting

*National map unit symbol:* 1jtv8

*Elevation:* 20 to 250 feet

*Mean annual precipitation:* 46 to 54 inches

*Mean annual air temperature:* 70 to 77 degrees F

*Frost-free period:* 350 to 365 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Placid, depressional, and similar soils:* 60 percent

*Myakka, depressional, and similar soils:* 30 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Placid, Depressional

#### Setting

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Parent material:* Sandy marine deposits

#### Typical profile

*A - 0 to 18 inches:* fine sand

*Cg - 18 to 80 inches:* fine sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Runoff class:* High

*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* None

*Frequency of ponding:* Frequent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Moderate (about 6.2 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7w

*Hydrologic Soil Group:* A/D

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

## Custom Soil Resource Report

*Forage suitability group:* Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)

*Other vegetative classification:* Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL), Freshwater Marshes and Ponds (R154XY010FL)

*Hydric soil rating:* Yes

### Description of Myakka, Depressional

#### Setting

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Parent material:* Sandy marine deposits

#### Typical profile

*A - 0 to 3 inches:* fine sand

*E - 3 to 25 inches:* fine sand

*Bh - 25 to 35 inches:* fine sand

*Cg - 35 to 80 inches:* fine sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Runoff class:* High

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 5.95 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* None

*Frequency of ponding:* Frequent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 5.5 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7w

*Hydrologic Soil Group:* A/D

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Forage suitability group:* Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)

*Other vegetative classification:* Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL), Freshwater Marshes and Ponds (R154XY010FL)

*Hydric soil rating:* Yes

### Minor Components

#### Basinger, depressional

*Percent of map unit:* 3 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave



## Custom Soil Resource Report

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL), Freshwater Marshes and Ponds (R154XY010FL)

*Hydric soil rating:* Yes

### **Ona, hydric**

*Percent of map unit:* 3 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* Yes

### **St. Johns, hydric**

*Percent of map unit:* 2 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), Cutthroat Seeps (R154XY007FL)

*Hydric soil rating:* Yes

### **Pomona, hydric**

*Percent of map unit:* 2 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* Yes

## **27—Kendrick fine sand, 0 to 5 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2v171

*Elevation:* 30 to 300 feet

*Mean annual precipitation:* 44 to 56 inches

*Mean annual air temperature:* 68 to 75 degrees F

*Frost-free period:* 300 to 365 days

*Farmland classification:* Farmland of unique importance

### Map Unit Composition

*Kendrick and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Kendrick

#### Setting

*Landform:* Knolls on marine terraces, ridges on marine terraces

*Landform position (two-dimensional):* Shoulder, summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy marine deposits over loamy marine deposits

#### Typical profile

*A - 0 to 7 inches:* fine sand

*E - 7 to 28 inches:* fine sand

*Bt - 28 to 73 inches:* sandy clay loam

*BC - 73 to 80 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 0 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Negligible

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 4.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* A

*Forage suitability group:* Sandy over loamy soils on knolls and ridges of mesic uplands (G154XB211FL)

*Other vegetative classification:* Sandy over loamy soils on knolls and ridges of mesic uplands (G154XB211FL), Upland Hardwood Hammock (R154XY008FL)

*Hydric soil rating:* No

### Minor Components

#### Candler

*Percent of map unit:* 7 percent

*Landform:* Ridges on marine terraces, knolls on marine terraces

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Interfluve, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Other vegetative classification:* Longleaf Pine-Turkey Oak Hills (R154XY002FL),  
Sandy soils on ridges and dunes of xeric uplands (G155XB111FL)

*Hydric soil rating:* No

**Micanopy**

*Percent of map unit:* 5 percent

*Landform:* Rises on marine terraces

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Interfluve, tal

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Other vegetative classification:* Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)

*Hydric soil rating:* No

**Nobleton**

*Percent of map unit:* 4 percent

*Landform:* Rises on marine terraces

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Other vegetative classification:* Sandy over loamy soils on rises and knolls of mesic uplands (G154XB231FL)

*Hydric soil rating:* No

**Blichton**

*Percent of map unit:* 4 percent

*Landform:* Ridges on marine terraces, knolls on marine terraces

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope, interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Other vegetative classification:* Sandy over loamy, loamy, or clayey soils on flats and rises of hydric uplands (G154XB441FL)

*Hydric soil rating:* No

**31—Adamsville fine sand, 0 to 2 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2r8h8

*Elevation:* 10 to 100 feet

*Mean annual precipitation:* 47 to 56 inches

*Mean annual air temperature:* 68 to 75 degrees F

*Frost-free period:* 290 to 365 days

*Farmland classification:* Farmland of unique importance

**Map Unit Composition**

*Adamsville and similar soils:* 95 percent

*Minor components:* 5 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Adamsville

### Setting

*Landform:* Flats on marine terraces, rises on marine terraces

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve, talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy marine deposits

### Typical profile

*Ap - 0 to 7 inches:* fine sand

*C1 - 7 to 20 inches:* fine sand

*C2 - 20 to 80 inches:* fine sand

### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)

*Depth to water table:* About 18 to 42 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Very low (about 3.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* A/D

*Forage suitability group:* Sandy soils on rises and knolls of mesic uplands (G154XB131FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)

*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands (G154XB131FL), South Florida Flatwoods (R154XY003FL), Upland Hardwood Hammock (R155XY008FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)

*Hydric soil rating:* No

## Minor Components

### Myakka

*Percent of map unit:* 3 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Tread, talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)

*Hydric soil rating:* No

### Basinger

*Percent of map unit:* 2 percent

*Landform:* Drainageways  
*Landform position (three-dimensional):* Dip, talf  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, convex  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G155XB141FL), Slough (R155XY011FL)  
*Hydric soil rating:* Yes

### **32—Kaliga muck, frequently ponded, 0 to 1 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2tzx5  
*Elevation:* 0 to 130 feet  
*Mean annual precipitation:* 44 to 55 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

#### **Map Unit Composition**

*Kaliga and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Kaliga**

##### **Setting**

*Landform:* Depressions on flatwoods on marine terraces  
*Landform position (three-dimensional):* Tread, dip, talf  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Parent material:* Herbaceous organic material over loamy marine deposits

##### **Typical profile**

*Oa - 0 to 25 inches:* muck  
*C1 - 25 to 35 inches:* fine sandy loam  
*C2 - 35 to 60 inches:* sandy clay loam  
*C3 - 60 to 80 inches:* sandy clay loam

##### **Properties and qualities**

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Very poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 0 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* Frequent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0



## Custom Soil Resource Report

*Available water supply, 0 to 60 inches:* Very high (about 15.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7w

*Hydrologic Soil Group:* C/D

*Forage suitability group:* Organic soils in depressions and on flood plains  
(G155XB645FL)

*Other vegetative classification:* Organic soils in depressions and on flood plains  
(G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)

*Hydric soil rating:* Yes

### Minor Components

#### Samsula

*Percent of map unit:* 5 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Other vegetative classification:* Organic soils in depressions and on flood plains  
(G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)

*Hydric soil rating:* Yes

#### Tequesta

*Percent of map unit:* 4 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Other vegetative classification:* Organic soils in depressions and on flood plains  
(G156AC645FL), Freshwater Marshes and Ponds (R156BY010FL)

*Hydric soil rating:* Yes

#### Chobee

*Percent of map unit:* 4 percent

*Landform:* Depressions on flatwoods on marine terraces

*Landform position (three-dimensional):* Tread, talf, dip

*Down-slope shape:* Linear, concave

*Across-slope shape:* Concave, linear

*Other vegetative classification:* Organic soils in depressions and on flood plains  
(G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)

*Hydric soil rating:* Yes

#### Felda

*Percent of map unit:* 4 percent

*Landform:* Depressions on marine terraces, flatwoods on marine terraces

*Landform position (three-dimensional):* Tread, dip, talf

*Down-slope shape:* Linear

*Across-slope shape:* Concave, linear

*Other vegetative classification:* Slough (R155XY011FL), Sandy over loamy soils  
on flats of hydric or mesic lowlands (G155XB241FL)

*Hydric soil rating:* Yes

#### Placid

*Percent of map unit:* 3 percent

*Landform:* Drainageways on marine terraces, depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Other vegetative classification:* Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL), Freshwater Marshes and Ponds (R155XY010FL)  
*Hydric soil rating:* Yes

### **35—Hontoon muck, frequently ponded, 0 to 1 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2vbpq  
*Elevation:* 0 to 250 feet  
*Mean annual precipitation:* 43 to 63 inches  
*Mean annual air temperature:* 68 to 77 degrees F  
*Frost-free period:* 300 to 365 days  
*Farmland classification:* Not prime farmland

#### **Map Unit Composition**

*Hontoon and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Hontoon**

##### **Setting**

*Landform:* Depressions on marine terraces  
*Landform position (three-dimensional):* Tread, dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Parent material:* Herbaceous organic material

##### **Typical profile**

*Oa - 0 to 75 inches:* muck  
*AC - 75 to 80 inches:* sandy loam

##### **Properties and qualities**

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Very poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* About 0 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* Frequent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Very high (about 23.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7w

*Hydrologic Soil Group:* A/D

*Forage suitability group:* Organic soils in depressions and on flood plains  
(G154XB645FL)

*Other vegetative classification:* Organic soils in depressions and on flood plains  
(G154XB645FL), Freshwater Marshes and Ponds (R154XY010FL)

*Hydric soil rating:* Yes

**Minor Components**

**Samsula**

*Percent of map unit:* 5 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Other vegetative classification:* Organic soils in depressions and on flood plains  
(G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)

*Hydric soil rating:* Yes

**Hontoon, drained**

*Percent of map unit:* 5 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Other vegetative classification:* Organic soils in depressions and on flood plains  
(G154XB645FL), Freshwater Marshes and Ponds (R154XY010FL)

*Hydric soil rating:* Yes

**Placid**

*Percent of map unit:* 3 percent

*Landform:* Drainageways on marine terraces, depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Other vegetative classification:* Sandy soils on stream terraces, flood plains, or in  
depressions (G155XB145FL), Freshwater Marshes and Ponds  
(R155XY010FL)

*Hydric soil rating:* Yes

**Basinger**

*Percent of map unit:* 2 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Tread, dip

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands  
(G155XB141FL)

*Hydric soil rating:* Yes

## 42—Felda fine sand

### Map Unit Setting

*National map unit symbol:* 1jtv  
*Elevation:* 20 to 200 feet  
*Mean annual precipitation:* 46 to 54 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Felda and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Felda

#### Setting

*Landform:* Drainageways on marine terraces  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Parent material:* Sandy and loamy marine deposits

#### Typical profile

*A - 0 to 5 inches:* fine sand  
*Eg - 5 to 22 inches:* fine sand  
*Btg - 22 to 50 inches:* sandy clay loam  
*Cg - 50 to 80 inches:* sandy loam

#### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 5.95 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 15 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* A/D

## Custom Soil Resource Report

*Ecological site:* R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps

*Forage suitability group:* Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)

*Other vegetative classification:* Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL), Slough (R154XY011FL)

*Hydric soil rating:* Yes

### Minor Components

#### Floridana, depressional

*Percent of map unit:* 5 percent

*Landform:* Depressions on marine terraces

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Ecological site:* R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps

*Other vegetative classification:* Sandy over loamy soils on stream terraces, flood plains, or in depressions (G154XB245FL), Freshwater Marshes and Ponds (R154XY010FL)

*Hydric soil rating:* Yes

#### Malabar

*Percent of map unit:* 5 percent

*Landform:* Flats on marine terraces, drainageways on marine terraces

*Landform position (three-dimensional):* Talf, dip

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), Slough (R154XY011FL)

*Hydric soil rating:* Yes

#### Oldsmar, non-hydric

*Percent of map unit:* 5 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G154XB141FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

#### Bradenton, hydric

*Percent of map unit:* 5 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F155XY140FL - Loamy and Clayey Hardwood Hammocks

*Other vegetative classification:* Loamy and clayey soils on flats of hydric or mesic lowlands (G154XB341FL), Upland Hardwood Hammock (R154XY008FL)

*Hydric soil rating:* Yes



## 47—Zolfo fine sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 2w0q1

*Elevation:* 30 to 160 feet

*Mean annual precipitation:* 44 to 56 inches

*Mean annual air temperature:* 68 to 77 degrees F

*Frost-free period:* 350 to 365 days

*Farmland classification:* Farmland of unique importance

### Map Unit Composition

*Zolfo and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Zolfo

#### Setting

*Landform:* Flatwoods on marine terraces, rises on marine terraces

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Tread, rise

*Down-slope shape:* Linear, convex

*Across-slope shape:* Linear

*Parent material:* Sandy marine deposits

#### Typical profile

*A - 0 to 5 inches:* fine sand

*E - 5 to 59 inches:* fine sand

*Bh - 59 to 80 inches:* fine sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 2.00 in/hr)

*Depth to water table:* About 18 to 42 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 4.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* A

*Forage suitability group:* Sandy soils on rises and knolls of mesic uplands  
(G155XB131FL)

## Custom Soil Resource Report

*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands (G155XB131FL), South Florida Flatwoods (R155XY003FL)  
*Hydric soil rating:* No

### Minor Components

#### Myakka

*Percent of map unit:* 5 percent  
*Landform:* Drainageways on flatwoods on marine terraces  
*Landform position (three-dimensional):* Tread, talf, dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear, concave  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)  
*Hydric soil rating:* No

#### Millhopper

*Percent of map unit:* 4 percent  
*Landform:* Flatwoods on marine terraces, rises on marine terraces  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Tread, talf, rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Other vegetative classification:* Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)  
*Hydric soil rating:* No

#### Tavares

*Percent of map unit:* 4 percent  
*Landform:* Flatwoods on marine terraces, knolls on marine terraces, rises on marine terraces  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve, side slope, tread, rise  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear, convex  
*Other vegetative classification:* Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sand Pine Scrub (R155XY001FL)  
*Hydric soil rating:* No

#### Malabar

*Percent of map unit:* 2 percent  
*Landform:* — error in exists on —  
*Landform position (three-dimensional):* Tread, talf, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)  
*Hydric soil rating:* Yes

## 49—Adamsville-Urban land complex

### Map Unit Setting

*National map unit symbol:* 1jtvz  
*Elevation:* 10 to 120 feet  
*Mean annual precipitation:* 46 to 54 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Adamsville and similar soils:* 60 percent  
*Urban land:* 30 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Adamsville

#### Setting

*Landform:* Flats on marine terraces, rises on marine terraces  
*Landform position (three-dimensional):* Interfluve, tal  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Sandy marine deposits

#### Typical profile

*A - 0 to 6 inches:* fine sand  
*C - 6 to 80 inches:* fine sand

#### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* About 24 to 42 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 3.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* A  
*Ecological site:* F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)

## Custom Soil Resource Report

*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* No

### Description of Urban Land

#### Setting

*Landform:* Marine terraces  
*Landform position (three-dimensional):* Interfluve, talus  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* No parent material

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Ecological site:* F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Unranked

### Minor Components

#### Satellite

*Percent of map unit:* 5 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL), Sand Pine Scrub (R154XY001FL)  
*Hydric soil rating:* No

#### Tavares

*Percent of map unit:* 5 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)  
*Hydric soil rating:* No

## 51—Pomona-Urban land complex

### Map Unit Setting

*National map unit symbol:* 1jtw1

*Elevation:* 20 to 120 feet

*Mean annual precipitation:* 46 to 54 inches

*Mean annual air temperature:* 70 to 77 degrees F

*Frost-free period:* 350 to 365 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Pomona, non-hydric, and similar soils:* 45 percent

*Urban land:* 30 percent

*Pomona, hydric, and similar soils:* 10 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Pomona, Non-hydric

#### Setting

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy and loamy marine deposits

#### Typical profile

*A - 0 to 6 inches:* fine sand

*E - 6 to 21 inches:* sand

*Bh - 21 to 26 inches:* loamy fine sand

*E' - 26 to 48 inches:* fine sand

*Btg - 48 to 73 inches:* fine sandy loam

*Cg - 73 to 80 inches:* loamy sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Runoff class:* High

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.20 to 1.98 in/hr)

*Depth to water table:* About 6 to 18 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 5.7 inches)



**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* No

**Description of Urban Land**

**Setting**

*Landform:* Marine terraces  
*Landform position (three-dimensional):* Interfluve, talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* No parent material

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Unranked

**Description of Pomona, Hydric**

**Setting**

*Landform:* Flats on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy and loamy marine deposits

**Typical profile**

*A - 0 to 6 inches:* fine sand  
*E - 6 to 21 inches:* sand  
*Bh - 21 to 26 inches:* loamy fine sand  
*E' - 26 to 48 inches:* fine sand  
*Btg - 48 to 73 inches:* fine sandy loam  
*Cg - 73 to 80 inches:* loamy sand

**Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 1.98 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0

## Custom Soil Resource Report

*Available water supply, 0 to 60 inches:* Low (about 5.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4w

*Hydrologic Soil Group:* A/D

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL)

*Hydric soil rating:* Yes

### Minor Components

#### Myakka

*Percent of map unit:* 5 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

#### Immokalee

*Percent of map unit:* 5 percent

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL)

*Hydric soil rating:* No

#### Wauchula, non-hydric

*Percent of map unit:* 5 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY130FL - Sandy over Loamy Flatwoods and Hammocks

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

## 53—Myakka-Immokolee-Urban land complex

### Map Unit Setting

*National map unit symbol:* 1jtw2

*Elevation:* 20 to 210 feet

*Mean annual precipitation:* 46 to 54 inches

*Mean annual air temperature:* 70 to 77 degrees F

*Frost-free period:* 350 to 365 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Myakka, non-hydric, and similar soils:* 30 percent

*Urban land:* 25 percent

*Immokalee and similar soils:* 25 percent

*Myakka, hydric, and similar soils:* 10 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Myakka, Non-hydric

#### Setting

*Landform:* Flatwoods on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy marine deposits

#### Typical profile

*A - 0 to 7 inches:* fine sand

*E - 7 to 25 inches:* fine sand

*Bh - 25 to 36 inches:* fine sand

*C - 36 to 80 inches:* fine sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Runoff class:* High

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 5.95 in/hr)

*Depth to water table:* About 6 to 18 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 5.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* No

**Description of Urban Land**

**Setting**

*Landform:* Marine terraces  
*Landform position (three-dimensional):* Interfluvial, talus  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* No parent material

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Unranked

**Description of Immokalee**

**Setting**

*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Talus  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Sandy marine deposits

**Typical profile**

*A - 0 to 7 inches:* sand  
*E - 7 to 39 inches:* sand  
*Bh - 39 to 58 inches:* sand  
*E' - 58 to 66 inches:* sand  
*B'h - 66 to 80 inches:* sand

**Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* About 6 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* No

**Description of Myakka, Hydric**

**Setting**

*Landform:* Flats on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy marine deposits

**Typical profile**

*A - 0 to 7 inches:* fine sand  
*E - 7 to 25 inches:* fine sand  
*Bh - 25 to 36 inches:* fine sand  
*C - 36 to 80 inches:* fine sand

**Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 5.95 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Low (about 5.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Yes

**Minor Components**

**Ona, non-hydric**

*Percent of map unit:* 3 percent  
*Landform:* Flats on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex



## Custom Soil Resource Report

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

### **Basinger**

*Percent of map unit:* 3 percent

*Landform:* Drainageways on marine terraces

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), Slough (R154XY011FL)

*Hydric soil rating:* Yes

### **Pomello**

*Percent of map unit:* 2 percent

*Landform:* Knolls on marine terraces, ridges on marine terraces

*Landform position (three-dimensional):* Interfluvium, rise

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks  
on Rises and Knolls

*Other vegetative classification:* Sandy soils on rises and knolls of mesic uplands  
(G154XB131FL), Sand Pine Scrub (R154XY001FL)

*Hydric soil rating:* No

### **Pomona, non-hydric**

*Percent of map unit:* 2 percent

*Landform:* Flats on marine terraces

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* F155XY120FL - Sandy Flatwoods and Hammocks

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), South Florida Flatwoods (R154XY003FL)

*Hydric soil rating:* No

## **54—Pomello-Urban land complex**

### **Map Unit Setting**

*National map unit symbol:* 1jtw3

*Elevation:* 10 to 180 feet

*Mean annual precipitation:* 46 to 54 inches

*Mean annual air temperature:* 70 to 77 degrees F

## Custom Soil Resource Report

*Frost-free period:* 350 to 365 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Pomello and similar soils:* 55 percent

*Urban land:* 30 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Pomello

#### Setting

*Landform:* Flats on marine terraces, rises on marine terraces

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy marine deposits

#### Typical profile

*A - 0 to 5 inches:* fine sand

*E - 5 to 48 inches:* fine sand

*Bh - 48 to 63 inches:* fine sand

*BC - 63 to 80 inches:* fine sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)

*Depth to water table:* About 24 to 42 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 4.3 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* A

*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)

*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)

*Hydric soil rating:* No

### Description of Urban Land

#### Setting

*Landform:* Marine terraces

*Landform position (three-dimensional):* Interfluve, talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* No parent material

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Unranked

**Minor Components**

**Immokalee, non-hydric**

*Percent of map unit:* 5 percent  
*Landform:* Flatwoods on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL), South Florida Flatwoods (R154XY003FL)  
*Hydric soil rating:* No

**St. Johns, hydric**

*Percent of map unit:* 5 percent  
*Landform:* Flats on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL), Cutthroat Seeps (R154XY007FL)  
*Hydric soil rating:* Yes

**Satellite**

*Percent of map unit:* 5 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (three-dimensional):* Interfluvium  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL), Sand Pine Scrub (R154XY001FL)  
*Hydric soil rating:* No

**55—Sparr-Urban land complex, 0 to 5 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 1jtw4  
*Elevation:* 20 to 150 feet  
*Mean annual precipitation:* 46 to 54 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Sparr and similar soils:* 50 percent

*Urban land:* 35 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Sparr

#### Setting

*Landform:* Flats on marine terraces, rises on marine terraces

*Landform position (three-dimensional):* Interfluve, rise

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy and loamy marine deposits

#### Typical profile

*A - 0 to 8 inches:* sand

*E - 8 to 57 inches:* sand

*Bt - 57 to 80 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 0 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Runoff class:* Negligible

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* About 18 to 42 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 4.0

*Available water supply, 0 to 60 inches:* Low (about 4.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* A/D

*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL)

*Hydric soil rating:* No

### Description of Urban Land

#### Setting

*Landform:* Marine terraces

*Landform position (three-dimensional):* Interfluve, tal

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* No parent material

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)

## Custom Soil Resource Report

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL)  
*Hydric soil rating:* Unranked

### Minor Components

#### Millhopper

*Percent of map unit:* 4 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), Upland Hardwood Hammock (R154XY008FL)  
*Hydric soil rating:* No

#### Apopka

*Percent of map unit:* 4 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (three-dimensional):* Interfluve, side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)  
*Hydric soil rating:* No

#### Candler

*Percent of map unit:* 4 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)  
*Hydric soil rating:* No

#### Tavares

*Percent of map unit:* 3 percent  
*Landform:* Knolls on marine terraces, ridges on marine terraces  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)  
*Hydric soil rating:* No

## 59—Arents-Urban land complex, 0 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* 1jtw7



## Custom Soil Resource Report

*Elevation:* 50 to 210 feet  
*Mean annual precipitation:* 46 to 54 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Arents and similar soils:* 55 percent  
*Urban land:* 45 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Arents

#### Setting

*Landform:* Rises on marine terraces  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Altered marine deposits

#### Typical profile

*C - 0 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* About 18 to 36 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Very low (about 3.0 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* A  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* No

### Description of Urban Land

#### Setting

*Landform:* Marine terraces  
*Landform position (three-dimensional):* Interfluvial, talus  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* No parent material

#### Interpretive groups

*Land capability classification (irrigated):* None specified

## Custom Soil Resource Report

*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Unranked

### 60—Arents, sandy

#### Map Unit Setting

*National map unit symbol:* 1jtw8  
*Elevation:* 80 to 230 feet  
*Mean annual precipitation:* 46 to 54 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Arents, sandy, and similar soils:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Arents, Sandy

##### Setting

*Landform:* Rises on marine terraces  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Altered marine deposits

##### Typical profile

*AC - 0 to 80 inches:* sand

##### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Very high (19.98 to 50.02 in/hr)  
*Depth to water table:* About 24 to 48 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Very low (about 2.4 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* A  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)

*Other vegetative classification:* Forage suitability group not assigned  
(G154XB999FL)  
*Hydric soil rating:* No

## **61—Arents, organic substratum-Urban land complex**

### **Map Unit Setting**

*National map unit symbol:* 1jtw9  
*Elevation:* 50 to 180 feet  
*Mean annual precipitation:* 46 to 54 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Arents, organic substratum, and similar soils:* 51 percent  
*Urban land:* 49 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Arents, Organic Substratum**

#### **Setting**

*Landform:* Flats on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Sandy dredge spoils over organic material over sandy marine deposits

#### **Typical profile**

*C - 0 to 30 inches:* sand  
*Oa - 30 to 65 inches:* muck  
*Cg - 65 to 80 inches:* sand

#### **Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* About 24 to 36 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Very high (about 13.8 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* A

*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* No

### **Description of Urban Land**

#### **Setting**

*Landform:* Marine terraces  
*Landform position (three-dimensional):* Interfluve, talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* No parent material

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Unranked

## **63—Tavares-Urban land complex**

### **Map Unit Setting**

*National map unit symbol:* 1jtwc  
*Elevation:* 20 to 120 feet  
*Mean annual precipitation:* 46 to 54 inches  
*Mean annual air temperature:* 70 to 77 degrees F  
*Frost-free period:* 350 to 365 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Tavares and similar soils:* 75 percent  
*Urban land:* 25 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Tavares**

#### **Setting**

*Landform:* Rises on marine terraces, flats on marine terraces  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Eolian or sandy marine deposits

#### **Typical profile**

*A - 0 to 8 inches:* fine sand  
*C - 8 to 80 inches:* fine sand

#### **Properties and qualities**

*Slope:* 0 to 2 percent

## Custom Soil Resource Report

*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 50.02 in/hr)  
*Depth to water table:* About 42 to 72 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 4.0  
*Available water supply, 0 to 60 inches:* Very low (about 2.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* A  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* No

## Description of Urban Land

### Setting

*Landform:* Marine terraces  
*Landform position (three-dimensional):* Interfluve, talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* No parent material

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Unranked

## 99—Water

### Map Unit Composition

*Water:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Water

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Forage suitability group:* Forage suitability group not assigned (G154XB999FL)  
*Other vegetative classification:* Forage suitability group not assigned (G154XB999FL)  
*Hydric soil rating:* Unranked





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## APPENDIX B: USACE WETLAND DATA FORMS

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: 4-15-24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W01-U  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.043277 Long: -82.014019 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks:		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>NO hydrology indicators observed.</u>		

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point:

WOI-U

Tree Stratum (Plot size: <u>30'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Quercus virginiana</u>	<u>60</u>	<u>Y</u>	
2.	<u>Cinnimomum camphorata</u>	<u>20</u>		
3.	<u>Sabal palmetto</u>	<u>15</u>		<u>FAC</u>
4.				
5.				
6.				
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		

Sapling Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Cinnimomum camphorata</u>	<u>40</u>	<u>Y</u>	
2.				
3.				
4.				
5.				
6.				
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		

Shrub Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Sambucus canadensis</u>			<u>FACW</u>
2.				
3.				
4.				
5.				
6.				
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		

Herb Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Nephrrolepis sp.</u>	<u>40</u>		<u>FAC</u>
2.	<u>Urena lobata</u>	<u>20</u>		<u>FAC</u>
3.	<u>Hypoxis alata (candem Vertic.)</u>	<u>10</u>		<u>NI</u>
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		

Woody Vine Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Vitis rotundifolia</u>	<u>15</u>		<u>FAC</u>
2.				
3.				
4.				
5.				
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below).

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**
**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?**

Yes \_\_\_\_\_ No \_\_\_\_\_



## SOIL

Sampling Point: Wol-u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/1	100					Fine Sand	
8-18	10YR 4/2	100					fine sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

18" soil pit excavated

NO hydric soils indicators observed.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: 4-15-24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W01-W

Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): low lands Local relief (concave, convex, none): flat Slope (%): 0-2

Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.043398 Long: -82.014133 Datum: \_\_\_\_\_

Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata)** – Use scientific names of plants.

Sampling Point: Wol-W

Tree Stratum (Plot size: <u>30'</u> )			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Quercus laurifolia</u>		<u>30</u>	<u>Y</u>	<u>FACW</u>
2.	<u>Celtis laevigata</u>		<u>20</u>	<u>Y</u>	<u>FACW</u>
3.	<u>Ulmus americanus</u>		<u>25</u>	<u>Y</u>	<u>FACW</u>
4.					
5.					
6.					
			_____ = Total Cover		
50% of total cover: _____			20% of total cover: _____		
Sapling Stratum (Plot size: _____)			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Acer rubrum</u>		<u>15</u>		<u>FAC</u>
2.	<u>Sambucus canadensis</u>		<u>15</u>		<u>ACW</u>
3.	<u>Cinnamomum camphorata</u>		<u>10</u>		<u>UPL</u>
4.					
5.					
6.					
			_____ = Total Cover		
50% of total cover: _____			20% of total cover: _____		
Shrub Stratum (Plot size: _____)			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Sambucus canadensis</u>		<u>15</u>		<u>FACW</u>
2.	<u>Celtis laevigata</u>		<u>10</u>		<u>FACW</u>
3.					
4.					
5.					
6.					
			_____ = Total Cover		
50% of total cover: _____			20% of total cover: _____		
Herb Stratum (Plot size: _____)			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Colocasia esculenta</u>		<u>15</u>		<u>FACW</u>
2.	<u>Condea verticillata</u>		<u>10</u>		<u>NI</u>
3.	<u>Nephrrolepis sp.</u>		<u>25</u>		<u>FAC</u>
4.	<u>Ptychotria nervosa</u>		<u>25</u>		<u>FAC</u>
5.					
6.					
7.					
8.					
9.					
10.					
11.					
			_____ = Total Cover		
50% of total cover: _____			20% of total cover: _____		
Woody Vine Stratum (Plot size: _____)			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Vitis rotundifolia</u>				<u>FAC</u>
2.					
3.					
4.					
5.					
			_____ = Total Cover		
50% of total cover: _____			20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is >50%

\_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No \_\_\_\_\_

## SOIL

Sampling Point: W01-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR 2.5/1	100					silty sand	
6-10	10YR 3/2	75	10YR 3/1	25			fine sand	
10-18	10YR 4/1	60	7.5YR 2.5/1	40			fine sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:



Lake Bonnet

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: W02-U City/County: \_\_\_\_\_ Sampling Date: 15 APR 24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W02-U  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point:

W02-U

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus virginiana</u>	<u>60</u>		<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____				Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				
5. _____				
6. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling Stratum (Plot size: _____)</b>				
1. <u>Cinnomomum camphorata</u>	<u>45</u>		<u>N/I</u>	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
2. <u>Sabal palm</u>	<u>20</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Shrub Stratum (Plot size: _____)</b>				
1. <u>Cinnamomum camph</u>	<u>25</u>		<u>NI</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) _____  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Psychotria nerviosa</u>	<u>20</u>		<u>FAC</u>	<b>Definitions of Five Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.
2. <u>Toxicodendron radicans</u>	<u>20</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. <u>Vitis rotundifolium</u>	<u>25</u>		<u>FAC</u>	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below). <u>No OBL or FACW species present</u>				



## SOIL

Sampling Point: W02-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 4/1	90	10YR 3/1	10			fine sand	
10-14	10YR 4/1	60	10YR 3/1	40			fine sand	
14-18	10YR 7/1	80	10YR 4/1	20			fine sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)*                          |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

No hydric soil indicators observed.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: WO2-W  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: 4-15-24  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks:	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Other (Explain in Remarks) <u>shallow root systems</u> <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>Wetland area crossed by large drainage ditch</u>		

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point:

W02-W

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus laurifolia</u>	<u>75%</u>	<u>Y</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling Stratum (Plot size: _____)</b>				
1. <u>Quercus laurifolia</u>	<u>25</u>	_____	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Shrub Stratum (Plot size: _____)</b>				
1. <u>Sabal palm</u>	<u>30</u>	_____	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Toxicodendron radicans</u>	<u>10</u>	_____	<u>FAC</u>	
2. <u>Ampelopsis arborea</u>	<u>5</u>	_____	<u>FA</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. <u>Vitis rotundifolia</u>	<u>5</u>	_____	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
 \_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

**Definitions of Five Vegetation Strata:**  
**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  
**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  
**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  
**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  
**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: W02-W

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 2/1	50	2.5Y 5/1	50			fine sand	
9-18	2.5Y 10YR 5/2	100					fine sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: W03-U  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: 4-16-24  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): gentle slope  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.044467 Long: -82.008281 Datum: 5-12-2  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks:		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)	
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b>			
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	
		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**VEGETATION (Five Strata)** – Use scientific names of plants.

 Sampling Point: W03-U

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. <u>Quercus nigra</u>	<u>50</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2. <u>Pinus elliotii</u>	<u>20</u>		<u>FACU</u>																	
3. _____	_____																			
4. _____	_____																			
5. _____	_____																			
6. _____	_____																			
_____ = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
50% of total cover: _____ 20% of total cover: _____																				
<b>Sapling Stratum (Plot size: _____)</b>																				
1. <u>Cinnamomum camphora</u>	<u>15</u>		<u>UPL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) _____  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Sebania palmetto</u>	<u>20</u>		<u>FAC</u>																	
3. _____	_____																			
4. _____	_____																			
5. _____	_____																			
6. _____	_____																			
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
<b>Shrub Stratum (Plot size: _____)</b>																				
1. <u>Cinnamomum</u>	<u>10</u>		<u>OPL</u>	<b>Definitions of Five Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.																
2. _____	_____																			
3. _____	_____																			
4. _____	_____																			
5. _____	_____																			
6. _____	_____																			
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
<b>Herb Stratum (Plot size: _____)</b>																				
1. <u>Vitis rotundifolia</u>	<u>40</u>		<u>FAC</u>	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																
2. _____	_____																			
3. _____	_____																			
4. _____	_____																			
5. _____	_____																			
6. _____	_____																			
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. <u>Smilax auriculata</u>	<u>20</u>		<u>FACU</u>	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																
2. _____	_____																			
3. _____	_____																			
4. _____	_____																			
5. _____	_____																			
6. _____	_____																			
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
Remarks: (If observed, list morphological adaptations below).																				



## SOIL

Sampling Point: W03-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	5YR 5/1	100					Fine Sand	
6-18	5YR 4/1	100					Fine Sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

NO hydric soil indicators

**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: Lake Bonnet City/County: Polk Sampling Date: W03-W  
 Applicant/Owner: \_\_\_\_\_ State: FL Sampling Point: 16 APR 24  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks: <div style="font-size: 1.2em; font-family: cursive;">Wetland area bisected by large ditch</div>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Surface Water (A1)  <input type="checkbox"/> High Water Table (A2)  <input type="checkbox"/> Saturation (A3)  <input checked="" type="checkbox"/> Water Marks (B1)  <input type="checkbox"/> Sediment Deposits (B2)  <input type="checkbox"/> Drift Deposits (B3)  <input type="checkbox"/> Algal Mat or Crust (B4)  <input type="checkbox"/> Iron Deposits (B5)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)  <input type="checkbox"/> Water-Stained Leaves (B9)         </div> <div style="width: 50%;"> <input type="checkbox"/> Aquatic Fauna (B13)  <input type="checkbox"/> Marl Deposits (B15) (LRR U)  <input type="checkbox"/> Hydrogen Sulfide Odor (C1)  <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)  <input type="checkbox"/> Presence of Reduced Iron (C4)  <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)  <input type="checkbox"/> Thin Muck Surface (C7)  <input type="checkbox"/> Other (Explain in Remarks)         </div> </div>	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks: <div style="font-size: 1.2em; font-family: cursive;">100% FACW spp for D5 &amp; flat terrace for D2</div>	

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus laurifolia</u>	<u>50</u>	<u>✓</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Celtis laevigata</u>	<u>25</u>	<u>✓</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
50% of total cover: <u>75</u> = Total Cover 20% of total cover: <u>15</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<b>Sapling Stratum (Plot size: _____)</b> 1. <u>Quercus laurifolia</u> <u>15</u> <u>✓</u> <u>FACW</u>				
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% of total cover: <u>15</u> = Total Cover 20% of total cover: <u>3</u>				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<b>Shrub Stratum (Plot size: _____)</b> 1. <u>Quercus laurifolia</u> <u>15</u> <u>✓</u> <u>FACW</u>				
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% of total cover: <u>15</u> = Total Cover 20% of total cover: <u>3</u>				<b>Definitions of Five Vegetation Strata:</b> <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. <b>Woody vine</b> – All woody vines, regardless of height.
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Cyclosorus interruptus</u> <u>85</u> <u>✓</u> <u>FACW</u>				
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% of total cover: <u>85</u> = Total Cover 20% of total cover: <u>17</u>				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____				
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
50% of total cover: _____ = Total Cover 20% of total cover: _____				
<b>Remarks: (If observed, list morphological adaptations below)</b>  				

## SOIL

Sampling Point: \_\_\_\_\_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10 YR 2/1	100					mucky sand	
8-16	10 YR 2/1	100					fine sand	organic-coated
16-718	10 YR 2/1						sandy muck	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Wetland area bisected by



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: 4-16-24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W04-U  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>upland</u>		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>Data point in manicured golf course</u>		

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____	
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: _____ 20% of total cover: _____					
<b>Sapling Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
6. _____	_____	_____	_____		
_____ = Total Cover				<b>Definitions of Five Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.	
50% of total cover: _____ 20% of total cover: _____					
<b>Herb Stratum (Plot size: 30)</b>					
1. <i>Stenotaphrum secundatum</i>	65		FAC		
2. <i>Dichondra carolinensis</i>	25		FAC		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: _____ 20% of total cover: _____					
<b>Woody Vine Stratum (Plot size: _____)</b>					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: _____ 20% of total cover: _____					
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>					
Remarks: (If observed, list morphological adaptations below).   					



## SOIL

Sampling Point: \_\_\_\_\_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:

NO soil pit, nearest upland located w/in  
upland golf course.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: 4-16-24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W04-W  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): 0-1  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.047420 Long: -82.009029 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		
Remarks: <u>Wetland</u>			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>9-inches</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>at surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: <u>Water table is 9" below surface</u>			

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point:

W04-W

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Magnolia virginiana</u>	<u>45</u>		<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. <u>Acer rubrum</u>	<u>15</u>		<u>FAC</u>	
3. <u>Quercus laurifolia</u>	<u>15</u>		<u>FACW</u>	Total Number of Dominant Species Across All Strata: _____ (B)
4. <u>Ulmus americana</u>	<u>10</u>		<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
5. _____				
6. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling Stratum (Plot size: _____)</b> 1. <u>Magnolia virginiana</u> <u>45</u> <u>FACW</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) _____  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% of total cover: _____ 20% of total cover: _____				
<b>Shrub Stratum (Plot size: _____)</b> 1. <u>Quercus laurifolia</u> <u>20</u> <u>FACW</u> 2. <u>Cephalanthus occidentalis</u> <u>15</u> <u>OBL</u> 3. _____ 4. _____ 5. _____ 6. _____				
_____ = Total Cover				<b>Definitions of Five Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Colocasia esculentus</u> <u>35</u> <u>FACW</u> 2. <u>Saururus cernuus</u> <u>25</u> <u>OBL</u> 3. <u>Persea punctatum</u> _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. <u>None</u> 2. _____ 3. _____ 4. _____ 5. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below) _____ _____ _____				

Sampling Point: W04-W

[illegible]<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                                 | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                          | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                             | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                         | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                        | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input checked="" type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)  | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)         | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input checked="" type="checkbox"/> Muck Presence (A8) (LRR U)         | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)                     | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)             | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                      | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  | <sup>3</sup> Indicators of hydrophytic vegetation and                  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)         | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         | wetland hydrology must be present,                                     |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)           | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              | unless disturbed or problematic.                                       |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                      | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                              | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                          | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input checked="" type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) |   |  |

<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Saturated soils, muck present @ surface



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: 4-16-24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W05-U  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): 0-1  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.048833 Long: -82.010608 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No _____	
Remarks: <u>upland</u>		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>Data point is w/in upland raised dirt road.</u>		



**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: W05-U

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Uraria lobata</u>	<u>20</u>	<u>FAC</u>	<u>UP</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____				
<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<b>Definitions of Five Vegetation Strata:</b> <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. <b>Woody vine</b> – All woody vines, regardless of height.				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>				
Remarks: (If observed, list morphological adaptations below). <u>Sample location is w/in raised road (fill)</u>				

## SOIL

Sampling Point: W05-U

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

Substrate of elevated roadway consists of mixed matrix of sand + various sized limestone rock fragments.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: 4-16-24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W05-W  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): 0-1  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.048772 Long: -82.010775 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>wetland</u>		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) – Use scientific names of plants.**

 Sampling Point: N05-W

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus laurifolia</u>	<u>60</u>		<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Acer rubrum</u>	<u>30</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling Stratum (Plot size: _____)</b>				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) _____  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>None</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Shrub Stratum (Plot size: _____)</b>				<b>Definitions of Five Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.
1. <u>None</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. <u>Saururus cernuus</u>	<u>65</u>		<u>OBL</u>	
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. <u>Ampelopsis arborea</u>	<u>20</u>		<u>FAC</u>	
2. <u>Nekemias</u>				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below). _____				

## SOIL

Sampling Point:

W05-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 2/1	100					organic	
12-18	10YR 5/1	100					fine sand	organic bodies

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Histosol (A1)                                | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                         | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                            | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                        | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                       | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input checked="" type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)        | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)                   | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)                    | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)            | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                     | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)        | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)          | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                     | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                             | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                         | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)           |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: W06-U  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: 4-17-24  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): 2-5  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.048901 Long: -82.009710 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>Upland</u>		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: W06-U

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Quercus laurifolia</u>	<u>35</u>		<u>FACW</u>
2.	<u>Quercus virginiana</u>	<u>35</u>		<u>FACU</u>
3.	_____	_____		
4.	_____	_____		
5.	_____	_____		
6.	_____	_____		
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		
Sapling Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Sabal palmetto</u>	<u>25</u>		<u>FAC</u>
2.	_____	_____		
3.	_____	_____		
4.	_____	_____		
5.	_____	_____		
6.	_____	_____		
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		
Shrub Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Cinnamomum camphorata</u>	<u>25</u>		<u>UPL</u>
2.	<u>Sabal palmetto</u>	<u>20</u>		<u>FAC</u>
3.	_____	_____		
4.	_____	_____		
5.	_____	_____		
6.	_____	_____		
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		
Herb Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Urena lobata</u>	<u>30</u>		<u>FAC</u>
2.	<u>Martheneocissus quinquefolia</u>	<u>15</u>		<u>FACU</u>
3.	_____	_____		
4.	_____	_____		
5.	_____	_____		
6.	_____	_____		
7.	_____	_____		
8.	_____	_____		
9.	_____	_____		
10.	_____	_____		
11.	_____	_____		
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		
Woody Vine Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____		
2.	_____	_____		
3.	_____	_____		
4.	_____	_____		
5.	_____	_____		
		_____ = Total Cover		
50% of total cover: _____		20% of total cover: _____		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is >50%

\_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ☒

Remarks: (If observed, list morphological adaptations below)

## SOIL

Sampling Point: W06-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/1	60	10YR 5/1	40	D	M	fine sand	earthworm c
6-14	10YR 4/2	65	10YR 3/1	35	MS	M	fine sand	
14-18	10YR 5/1	85	10YR 3/1	15	MS	M	fine sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: 4-17-24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W06-W  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): 0-1  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.049006 Long: -82.009848 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Wetland</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<u>8" 10YR 2/1 organic surface layer</u>	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____	
Wetland Hydrology Present? Yes _____ No _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION (Five Strata) – Use scientific names of plants.**

 Sampling Point: W06-W

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus laurifolia</u>	<u>75</u>		<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling Stratum (Plot size: _____)</b>				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. <u>Sabal palm</u>	<u>30</u>		<u>FAC</u>	
2. <u>Quercus laurifolia</u>	<u>25</u>		<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Shrub Stratum (Plot size: _____)</b>				<b>Definitions of Five Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  <b>Sapling</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  <b>Shrub</b> – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  <b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.  <b>Woody vine</b> – All woody vines, regardless of height.
1. <u>Sambucus nigra</u>	<u>20</u>		<u>FAC</u>	
2. <u>Quercus laurifolia</u>	<u>15</u>		<u>FACW</u>	
3. <u>Celtis laevigata</u>	<u>15</u>		<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Saururus cernuus</u>	<u>30</u>		<u>OBL</u>	Remarks: (If observed, list morphological adaptations below).
2. <u>Acer rubrum</u>	<u>5</u>		<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. <u>Toxicodendron radicans</u>	<u>20</u>		<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				



## SOIL

Sampling Point:

W06-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/1	100					Silt	
8-18	10YR 7/2	100					Fine sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Histosol (A1)                                | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                         | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                            | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                        | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                       | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)            | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)        | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)                   | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)                    | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                     | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)        | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)          | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                     | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                             | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                         | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)           |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: WOT-U  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: 4-18-24  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Birm Slope (%): 2-5  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.049154 Long: -82.005372 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks: <u>upland</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>No hydrologic indicators observed.</u>		

**VEGETATION (Five Strata) – Use scientific names of plants.**

 Sampling Point: W07-U

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Broussonetia papyrifera</u>	<u>30</u>		<u>FACU</u>
2. <u>Sabal palm</u>	<u>30</u>		<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus caroliniana</u>	<u>15</u>		<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sambucus canadensis</u>	<u>20</u>		<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cantua mutabilis</u>	<u>10</u>		<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Synedrella</u>	<u>5</u>		
2. <u>Dioscorea bulb</u>	<u>5</u>		<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is  $\leq 3.0^1$
- ☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**
**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?**

 Yes \_\_\_\_\_ No X

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: W07-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 7/2	33					fine sand	highly disturbed soil profile
0-18	10YR 6/1	33	10YR 2/1		C	M	fine sand	"
0-18	10YR 2/1	33					fine sand	"

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:

Soil profile mixed assemblage of soils. Highly disturbed

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet City/County: \_\_\_\_\_ Sampling Date: 11-07-17  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: 14-18-24  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 28.049287 Long: -82.005307 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Wetland</u>		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> _____ Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres along Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>14</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



# VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: W07-W

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>25</u>		<u>FAC</u>
2. <u>Quercus laurifolia</u>	<u>20</u>		
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sambucus nigra</u>	<u>25</u>		<u>FACW</u>
2. <u>Acer rubrum</u>	<u>20</u>		<u>FAC</u>
3. <u>Phlox reclinata</u>	<u>15</u>		
4. _____			
5. _____			
6. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Saururus cernuus</u>	<u>10</u>		<u>OBL</u>
2. <u>Colocasia esculentus</u>	<u>20</u>		<u>FACW</u>
3. <u>Cyclosorus interruptus</u>	<u>65</u>		<u>FACW</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Remarks: (If observed, list morphological adaptations below).

Koelerutaria trees + sapling prevalent

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is >50%

\_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

## SOIL

Sampling Point:

W07-W

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 2/1	100	mu				muck	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input checked="" type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet Flood Haz City/County: Polk Sampling Date: 23 APR 24  
 Applicant/Owner: City of Lakeland State: FL Sampling Point: W08-W  
 Investigator(s): M. Brainer, I. Mosley Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): bottom Local relief (concave, convex, none): concave Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR U Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) _____ Oxidized Rhizospheres along Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>14</u> Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	<u>15</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____				Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. <u>Saxifraga caroliniana</u> <u>45</u> <u>OBL</u>				
2. _____				
3. _____				
4. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Apocynum androsaemifolium</u> <u>45</u> <u>FACW</u>				
2. <u>Ludwigia peruviana</u>	<u>25</u>		<u>OBL</u>	
3. <u>Cyclosorus interruptus</u>	<u>20</u>		<u>FACW</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Remarks: (If observed, list morphological adaptations below).</b>				

## SOIL

Sampling Point: W08-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 2/1	100					organic rich muck	
6-18	10YR 6/3	100					coarse sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Histosol (A1)              | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input checked="" type="checkbox"/> Thick Dark Surface (A12)   | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

0-6" organic soil ~~for~~ layer



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet Flood Haz Mit City/County: \_\_\_\_\_ Sampling Date: 23 APR 24  
 Applicant/Owner: City of Lakeland State: FL Sampling Point: W08-U  
 Investigator(s): M. Brindley, T. Mosley Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): 2  
 Subregion (LRR or MLRA): LRR U Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks:	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>No indicators of hydrology observed</u>		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point:

W08-0

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Quercus virginiana</u>	<u>40</u>		<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u>Liquidambar styraciflua</u>	<u>15</u>		<u>FAC</u>															
3. _____	_____																	
4. _____	_____																	
5. _____	_____			<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
6. _____	_____																	
7. _____	_____																	
8. _____	_____																	
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
50% of total cover: _____ 20% of total cover: _____																		
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																		
1. <u>Broussonetia papyrifera</u>			<u>FACU</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____																		
3. _____																		
4. _____																		
5. _____				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
6. _____																		
7. _____																		
8. _____																		
<b>Herb Stratum (Plot size: _____)</b>																		
1. <u>Bidens alba</u>	<u>30</u>		<u>FACW</u>	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>														
2. <u>Rivina humilis</u>	<u>30</u>		<u>FACU</u>															
3. <u>Urochloa maxima</u>	<u>20</u>		<u>FAC</u>															
4. _____																		
5. _____				<b>Woody Vine Stratum (Plot size: _____)</b>														
6. _____																		
7. _____																		
8. _____																		
<b>Woody Vine Stratum (Plot size: _____)</b>																		
1. <u>None</u>				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>														
2. _____																		
3. _____																		
4. _____																		
5. _____				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>														
6. _____																		
7. _____																		
8. _____																		
<b>Remarks: (If observed, list morphological adaptations below).</b> <u>FAC + FACW or not greater than 50% of dominants</u>																		

## SOIL

Sampling Point: W08-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	YR 3/2	100					medium sand	
8-12	10YR 3/3	30	10YR 4/1	70			fine sand	
12-18	10YR 4/1	100						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

No hydric soil indicators observed

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet Flood Haz City/County: Polk Sampling Date: 23 APR 24  
 Applicant/Owner: City of Lakeland State: FL Sampling Point: W08-W2  
 Investigator(s): M. Breiner, I. Mosely Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks:	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>14</u> Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <i>Liquidambar styraciflua</i>	45		FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)														
2. <i>Magnolia virginiana</i>	30		FACW															
3. <i>Acer rubrum</i>	20		FAC															
4. <i>Quercus virginiana</i>	10		FAC															
5. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
50% of total cover: _____ 20% of total cover: _____																		
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																		
1. <i>Sambucus canadensis</i>	45		FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <i>Acer rubrum</i>	15		FAC															
3. <i>Urena lobata</i>	10		FACU															
4. <i>Sabal palmetto</i>	10		FAC															
5. _____	_____	_____	_____	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____														
50% of total cover: _____ 20% of total cover: _____																		
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
<b>Herb Stratum (Plot size: _____)</b>																		
1. <i>Apios americana</i>	55		FACW	<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____														
2. <i>Cyclosorus interruptus</i>	45		FACW															
3. <i>Telmatoblechnum serrulatum</i>	30		FACW															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
<b>Woody Vine Stratum (Plot size: _____)</b>																		
1. <i>Clematis virginiana</i>	10		FAC	<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____														
2. <i>Vitis cinerea</i>	10																	
3. <i>Smilax laurifolia</i>	5																	
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		

Remarks: (If observed, list morphological adaptations below).  
 Overystory in this area dominated by Lig. sty., Acer rub, & Mag. virg  
 Generally dense fern ground cover w/ much Apias



## SOIL

Sampling Point: \_\_\_\_\_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 2/1	100%					muck w/ minor coarse sand	
7-8	10YR 7/2	100					medium sand	
8-18	10YR 3/1	100					medium sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:

0-7" organic soil layer

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake City/County: \_\_\_\_\_ Sampling Date: 23 APR 24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W08-02  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ Aquatic Fauna (B13) ___ High Water Table (A2)      ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3)      ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1)      ___ Oxidized Rhizospheres along Living Roots (C3) ___ Sediment Deposits (B2)      ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4)      ___ Thin Muck Surface (C7) ___ Iron Deposits (B5)      ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ FAC-Neutral Test (D5) ___ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>No evidence of hydrology observed</u>		

# VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: \_\_\_\_\_

W08-02

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus caroliniana</u>	<u>75</u>		<u>FACU</u>
2. <u>Melia azedarach</u>	<u>15</u>		<u>UPL</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			

19 = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus caroliniana</u>	<u>40</u>		<u>FACU</u>
2. <u>Sambucus canadensis</u>			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus caroliniana</u>	<u>15</u>		
2. <u>Abrus praeatorius</u>	<u>10</u>		
3. <u>Smilax</u>	<u>10</u>		
4. <u>Dioscorea bulbifera</u>	<u>10</u>		
5. <u>Panicum maximum</u>	<u>15</u>		
6. <u>Dreva lobata</u>	<u>10</u>		
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Toxicaden</u>			
2. <u>Anisostichur capredate</u>			
3. _____			
4. _____			
5. _____			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is >50%

\_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: W08-U2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/2	100					medium grain sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

No hydric soil indicators observed

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet Hood Haz City/County: \_\_\_\_\_ Sampling Date: 24 APR 24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W08-W3  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Aquatic Fauna (B13) _____ High Water Table (A2) _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3) _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) _____ Sediment Deposits (B2) _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4) _____ Thin Muck Surface (C7) _____ Iron Deposits (B5) _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION (Four Strata) – Use scientific names of plants.**

W08-113  
Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)																
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)																
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)																
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width:100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
50% of total cover: _____ 20% of total cover: _____																				
Sapling/Shrub Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
_____ = Total Cover				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.																
50% of total cover: _____ 20% of total cover: _____																				
Herb Stratum (Plot size: <u>30</u> )																				
1. <u>Cenchrus purpureus</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>																	
2. <u>Apios americanus</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>																	
3. <u>Sambus canadensis</u>	<u>20</u>		<u>FACW</u>																	
4. <u>Ludwigia peruviana</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>																	
5. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____																
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
_____ = Total Cover																				
50% of total cover: <u>105</u> 20% of total cover: <u>21</u>																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
Remarks: (If observed, list morphological adaptations below).																				
<u>Herb stratum only stratum present</u> <u>&amp; Greater than 50% of dom. spp are OBL, FACW, FAC</u>																				

## SOIL

Sampling Point: W08 W3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/1	100						muck w/ minor occurrence of sand
5-13	10YR 3/1	95	5YR 5/8	5	D	PL	fine sand	oxid. rhizo
13-218	10YR 4/1	100					fine sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet Flood Haze City/County: \_\_\_\_\_ Sampling Date: 24 APR 24  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: W08-W3  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks:	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>No hydrology indicators observed</u>		

**VEGETATION (Four Strata) – Use scientific names of plants.**

W08-U3  
Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Prunus caroliniana</u>	<u>65</u>		<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Quercus virginiana</u>	<u>10</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
6. _____				
7. _____				
8. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. <u>Prunus caroliniana</u> <u>30</u> <u>FACU</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Cenchrus purpureus</u> <u>50</u> <u>FACU</u> 2. <u>Lantana camara</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 12. _____ _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. <u>Bignonia capreolata</u> <u>10</u> <u>FAC</u> 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
Remarks: (If observed, list morphological adaptations below).     				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>

## SOIL

Sampling Point: W08-U3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/2	100					fine sand	
6-10	10YR 4/2	50	10YR 5/3	50			fine sand	
10->18	10YR 4/1	100					fine sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)                        |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)                       |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)    |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)            |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)                                   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)                     |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)              |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |  |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |  |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |  |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |  |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |  |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Lake Bonnet Flood Haz City/County: Polk Sampling Date: 24 APR 24  
 Applicant/Owner: City of Lakeland State: \_\_\_\_\_ Sampling Point: W08-~~W~~W4  
 Investigator(s): M. Breiner, T. Mosley Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks: <u>Forested wtlnd W of Bonnet Springs Park fence &amp; S of OK Carz Lakeland. Primarily <i>Acer rubrum</i>, <i>Liquidambar styraciflua</i>, <i>Sabal palmetto</i>, &amp; <i>Quercus laurifolia</i></u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Wetland Hydrology Present? Yes _____ No _____	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____		
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: