

**ECOLOGICAL ASSESSMENT
MCINTOSH PLANT TO LAKE AGNES
SUBSTATION TRANSMISSION LINE
MAINTENANCE
POLK COUNTY, FLORIDA**

Prepared For:

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1.0 INTRODUCTION

The Orlando Utilities Commission (OUC) McIntosh Plant – Lake Agnes Substation 230-kV transmission line is located in Polk County, north of Lakeland (see Figures 1-1 through 1-3). OUC proposes to reconstruct and replace structures and facilities in the existing Lake Agnes Substation - McIntosh Substation Segment of the Lakeland-Taft Transmission Line. The Lakeland-Taft 230 kV Transmission Line is an associated facility of the McIntosh Station Unit 3, Site Certification (PA74-06, issued 1978). To upgrade the transmission line as required, a larger conductor must be installed, the existing insulator systems must be upgraded and certain structure modifications must be made to assure that the line is structurally sound and that the required safety clearances are maintained for the public and OUC personnel. In addition, structure access pads and access roads need to be upgraded for maintenance of the facilities. The original construction along the Lake Agnes Substation – McIntosh Substation Segment provided minimal access roads and minimal access pads at each transmission line structure. The existing access is not adequate to allow OUC's current utility maintenance/service trucks and equipment to perform maintenance work in and around the structure while the line is energized. Therefore, access roads and structure pads improvements are necessary to facilitate the line upgrades. Widening of Interstate I-4 from the Polk Parkway to just east of State Road 33 required the State of Florida to utilize 45 feet of the north side of the transmission line right of way. Replacement right of way has been acquired on the south side. As a part of this upgrade project, the transmission line (a total of 17 structures) will be reconstructed 45 feet south of the current location to accommodate the completed I-4 widening project. The transmission line structure access improvements are summarized in Table 1.

An environmental assessment of the transmission line corridor was conducted in December 2007 and May 2011, and included jurisdictional wetland delineation, documentation of threatened, endangered, and species of special concern (listed species), and wetland functional assessment utilizing the Florida Department of Environmental Protection (FDEP) Uniform Mitigation Assessment Methodology (UMAM). Methodology and results are discussed below.

2.0 METHODOLOGY

2.1 Wetland Delineation

Jurisdictional wetland areas were identified in accordance with applicable federal and state wetland criteria as set forth by the U.S. Army Corps of Engineers (ACOE) and the FDEP. Specifically, the right-of-way (ROW) was examined for the presence of hydrophytic vegetation, hydric soils, and hydrological indicators, by which the landward extent of wetlands was marked in the field with sequentially-numbered flagging tape and delineated upon aerial photography. The flagged boundaries were subsequently surveyed by a licensed professional survey crew; the completed survey is attached (Appendix A).

2.2 Listed Species

The transmission line ROW was assessed for the presence of threatened, endangered and/or species of special concern (listed species) in December 2007 and May 2011 via pedestrian and vehicular surveys. The locations of any listed species observations were recorded on aerial photographs. Listed plant species are those plants that are listed by the U.S. Fish and Wildlife Service (USFWS) or the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened, of special concern, or commercially exploited. Listed animal species are those animals that are listed as endangered, threatened, or of special concern federally by the USFWS or within the State of Florida by the Florida Fish and Wildlife Conservation Commission (FFWCC). Prior to field reconnaissance, county-specific lists of threatened and endangered species were obtained from the Florida Natural Areas Inventory (FNAI) (Table 2). In addition, geographic information system (GIS) data were obtained from the FNAI, who maintain a database of known occurrences of listed species throughout the State of Florida. The FNAI database was queried and documented locations of listed species within the vicinity of the transmission line ROW identified.

2.3 Wetland Functional Assessment

Rather than an acre-for-acre mitigation or the use of mitigation ratios, the calculation of mitigation requirements involves use of a wetland functional assessment value multiplied by the acreage of impact to determine the required number of mitigation credits. Wetland functional assessments typically involve ranking the subject wetland relative to several variables, such as

vegetation, wildlife utilization, hydrology, and surrounding landscape conditions. The goal of the functional assessment is to determine the ecological value of the wetland prior to disturbance, to ensure that mitigation is designed to replace the wetland's ecological functions rather than merely the acreage of fill. Using this rationale, a 2-acre wetland dominated by exotic vegetation with altered hydrology and little wildlife utilization would have a lower functional value and thus require fewer mitigation credits as compared to a 2-acre wetland supporting a diverse assemblage of native flora and fauna and unaltered hydrologic regime.

Information was collected during the field reconnaissance to prepare a wetland functional assessment utilizing the FDEP's UMAM, which quantifies wetland quality or health through evaluation of several variables, including location and landscape support, water environment, and community structure. The variables are defined in 62-345 F.A.C., and summarized as follows:

Location and landscape support – The value of functions provided by an assessment area to fish and wildlife is influenced by the landscape position of the assessment area and its relationship with surrounding areas. Many species that nest, feed or find cover in a specific habitat or habitat type are also dependent in varying degrees upon other habitats, including upland, wetland and other surface waters, that are present in the regional landscape. The location of the assessment area shall be considered to the extent that fish and wildlife utilizing the area have the opportunity to access other habitats necessary to fulfill their life history requirements. The availability, connectivity, and quality of offsite habitats, and offsite land uses which might adversely impact fish and wildlife utilizing these habitats, are factors to be considered in assessing the location of the assessment area. The location of the assessment area shall be considered relative to offsite and upstream hydrologic contributing areas and to downstream and other connected waters to the extent that the diversity and abundance of fish and wildlife and their habitats is affected in these areas. The opportunity for the assessment area to provide off site water quantity and quality benefits to fish and wildlife and their habitats downstream and in connected waters is assessed based on the degree of hydrologic connectivity between these habitats and the extent to which offsite habitats are affected by discharges from the assessment area.

Water Environment – The quantity of water in an assessment area, as well as the timing, frequency, depth and duration of inundation or saturation, flow characteristics, and the quality of that water, may facilitate or preclude its ability to perform certain functions and may benefit or adversely impact its capacity to support certain wildlife. Hydrologic requirements and tolerance to hydrologic alterations and water quality variations vary by ecosystem type and the wildlife

utilizing the ecosystem. Hydrologic conditions within an assessment area, including water quantity and quality, must be evaluated to determine the effect of these conditions on the functions performed by area and the extent to which these conditions benefit or adversely affect wildlife. Water quality within wetlands and other surface waters is affected by inputs from surrounding and upstream areas and the ability of the wetland or surface water system to assimilate those inputs.

Community Structure (Vegetation and Structural Habitat) – The presence, abundance, health, condition, appropriateness, and distribution of plant communities in surface waters, wetlands, and uplands can be used as indicators to determine the degree to which the functions of the community type identified are provided. Vegetation is the base of the food web in any community and provides many additional structural habitat benefits to fish and wildlife. Overall condition of a plant community can often be evaluated by observing indicators such as dead or dying vegetation, regeneration and recruitment, size and age distribution of trees and shrubs, fruit production, chlorotic or spindly plant growth, structure of the vegetation strata, and the presence, coverage and distribution of inappropriate plant species. Human activities such as mowing, grazing, off-road vehicle activity, boat traffic, and fire suppression constitute more direct and easily observable impacts affecting the condition of plant communities. Although short-term environmental factors such as excessive rainfall, drought, and fire can have temporary impacts, human activities such as flooding, drainage via groundwater withdrawal and conveyance canals, or construction of permanent structures such as seawalls in an aquatic system can permanently damage these systems. The plant community should be evaluated to consider whether natural successional patterns for the community type are permanently altered. Inappropriate plants, including invasive exotic species, other invasive species, or other species atypical of the community type being evaluated, do not support the functions attributable to that community type and can out-compete and replace native species. Native upland and wetland vegetation, such as wax myrtle, pines and willow, which are not typically considered as invasive, can occur in numbers and coverage not appropriate for the community type and can serve as indicators of disturbance. The relative degree of coverage by inappropriate species, inappropriate vegetation strata, condition of vegetation, and both biotic and abiotic structure all provide an indication of the degree to which the functions anticipated for the community type identified are being provided.

3.0 RESULTS

3.1 Wetlands

Wetland habitats associated with transmission line structures and access roads within the ROW are dominated by freshwater marshes (FLUCFCS 641) and ditches (FLUCFCS 511), with additional areas of wet prairie (FLUCFCS 643), cypress (FLUCFCS 621), an un-named creek and associated floodplain (FLUCFCS 510/630/641), wetland scrub (FLUCFCS 631), and reservoirs (FLUCFCS 534). Soil series within the ROW are identified on Figure 2-1 through 2-3; dominant series include Myakka fine sand; Smyrna fine sand; Basinger mucky fine sand, depressional; Immokalee sand; Pomona fine sand; Lynne sand; Arents, 0 to 5 percent slopes; Eaton mucky fine sand, depressional; Neilhurst sand, 1 to 5 percent slopes; Tavares fine sand, 0 to 5 percent slopes; Hontoon muck; Placid fine sands, depressional; and Samsula muck. The 100-year floodplain zones within the ROW are illustrated in Figures 3-1 through 3-3. Descriptions of each wetland type found within the ROW are provided below. ACOE wetland datasheets and jurisdictional determination (JD) forms are located in Appendix C. A summary of wetland habitat types, total acreage, proposed impact acreage, UMAM scores, and the resulting number of mitigation credits required is provided in Table 3.

Stream/Mixed Wetland Forest/Freshwater Marsh (Unnamed Creek) (FLUCFCS 510/630/641)

The east side of Wetland 40B is an unnamed creek with a floodplain cypress and hardwood swamp on the west bank (Appendix B, Photographs 1 and 2). A freshwater marsh fringe connects to the mixed wetland forest on the southern side of the bermed ROW road, vegetated with a mix of species including red maple (*Acer rubrum*), pond cypress (*Taxodium ascendens*), soft rush (*Juncus effusus*), spikerush (*Eleocharis* spp.), marsh pennywort (*Hydrocotyle umbellata*), and dogfennel (*Eupatorium capillifolium*).

Ditches (FLUCFCS 511)

There are a several ditched areas occurring along the transmission corridor (Appendix B, Photographs 3 and 4); some only occasionally inundated and others typically perennially containing water. These ditches are vegetated with a mixture of species such as dogfennel, ceasar weed (*Urena lobata*), swamp smartweed (*Polygonum hydropiperoides*), annual saltmarsh aster (*Symphyotrichum subulatum*), bristlegass (*Setaria* spp.), frogfruit (*Phyla nodiflora*), yellow flatsedge (*Cyperus flavescens*), soft rush, cattail (*Typha* sp.), rattlebox (*Sesbania* spp.), Brazilian

pepper (*Schinus terebinthifolius*), pickerelweed (*Pontederia cordata*), willow (*Salix* spp.), maiden fern (*Thelypteris* spp.), saltwater falsewillow (*Baccharis angustifolia*), cranebill (*Geranium* spp.), paragrass (*Urochloa mutica*), bermudagrass (*Cynodon dactylon*), Peruvian primrosewillow (*Ludwigia peruviana*), and torpedo grass (*Panicum repens*).

Reservoirs (FLUCFCS 534)

Several reservoirs exist along the transmission ROW (Appendix B, Photographs 5 and 6) and serve as stormwater retention basins. The banks and littoral zones are vegetated with a mix of species that include torpedo grass, swamp smartweed, marsh pennywort, spikerush, cypress (*Taxodium* spp.), willows, maidencane (*Panicum hemitomon*), frogfruit, water hyacinth (*Eichornia crassipes*), duckweed (*Lemna* spp.), piedmont primrosewillow (*Ludwigia arcuata*), dogfennel, saltwater falsewillow, bluestem (*Andropogon* spp.), Peruvian primrosewillow, sedges (*Carex* spp.), flatsedges (*Cyperus* spp.), bristlegass, bulltongue arrowhead (*Sagittaria lancifolia*), angletstem primrosewillow (*Ludwigia leptocarpa*), umbrellasedge (*Fuirena* spp.), rustweed (*Polypremum procumbens*), greenwhite sedge (*Carex albolutescens*), alligatorweed (*Alternanthera phioxeroides*), soft rush, wax myrtle (*Myrica cerifera*), Virginia chain fern (*Woodwardia virginica*), maiden fern, buttonbush (*Cephalanthus occidentalis*), cattail, and Brazilian pepper.

Cypress (FLUCFCS 621)

Cypress communities are vegetated by primarily by pond cypress or bald cypress (*Taxodium distichum*) with occasional other trees. Three cypress communities (Wetlands 44B, 43A, and 37A) exist along the transmission ROW (Appendix B, Photographs 7 and 8). Additional vegetation includes sawtooth blackberry (*Rubus argutus*), torpedo grass, soft rush, Peruvian primrosewillow, groundsel tree (*Baccharis halimifolia*), dogfennel, climbing aster (*Aster carolinianus*), tropical soda apple (*Solanum viarum*), swamp smartweed, and wax myrtle.

Wetland Scrub (FLUCFCS 631)

One area classified as wetland scrub (Wetland 6A) occurs along the transmission corridor (Appendix B, Photographs 9 and 10). This scrub wetland is vegetated with a mixture of species such as willows, dogfennel, Peruvian primrosewillow, Brazilian pepper, royal fern (*Osmunda regalis* var. *spectabilis*), maiden fern, elderberry (*Sambucus nigra*), sedges, woolgrass (*Scirpus cyperinus*), saltwater false willow, bluestem (*Andropogon* spp.), and smutgrass (*Sporobolus indicus*).

Freshwater Marsh (FLUCFCS 641)

Freshwater marsh wetlands are common along the ROW (Appendix B, Photographs 11 and 12). These habitats are dominated by emergent herbaceous species, including frogfruit, jessamine (*Gelsemium* spp.), alligatorweed, doveweed (*Murdannia nudiflora*), bristlegrass, bahiagrass (*Paspalum notatum*), flatsedges, American pokeweed (*Phytolacca americana*), Virginia chain fern, Carolina redroot (*Lachnanthes caroliana*), soft rush, swamp smartweed, cattail, cordgrass (*Spartina* spp.), bedstraw (*Galium* spp.), maidencane, blue maidencane (*Amphicarpum muhlenbergianum*), torpedo grass, and castorbean (*Ricinus communis*). Common shrub species within freshwater marsh habitats include piedmont staggerbush (*Lyonia mariana*), rattlebox, piedmont primrosewillow, spikerush, dogfennel, sweetbroom (*Scoparia dulcis*), Brazilian pepper, elderberry, buttonbush, and Peruvian primrosewillow, as well as occasional individual willow, false willow, red maple, and wax myrtle.

Wet Prairie (FLUCFCS 643)

Wet prairie is an infrequently inundated wetland habitat with predominantly herbaceous vegetation occurring upon hydric soils. Wet prairie habitat occurs within improved pasture areas of the ROW (Appendix B, Photographs 13 and 14), and supports low growth of wetland species including thin paspalum (*Paspalum setaceum*), bahiagrass, maidencane, spikerush, sweetbroom, Eastern blue-eyed grass (*Sisyrinchium atlanticum*), bedstraw, mermaidweed (*Proserpinaca* spp.), sedges, swamp smartweed, marsh pennywort, coinwort (*Centella asiatica*), bogbutton (*Lachnocaulon* spp.), and soft rush. Some wet prairie areas within the ROW are impacted by cattle grazing, which tramples vegetation, results in soil compaction, and also increases turbidity and erosion.

3.2 Listed Species

Listed species identified within and adjacent to the ROW include the Sherman's fox squirrel (*Sciurus niger shermani*), classified as a species of special concern by the FFWCC, gopher tortoise (*Gopherus polyphemus*), classified as threatened by the FFWCC, and the wood stork (*Mycteria americana*), classified by both the USFWS and the FFWCC as endangered (see Figures 4-0 through 4-3).

Sixty-six gopher tortoise burrows were identified within the ROW. A summary of their latitude and longitude locations and status (inactive, active) are presented in Table 4.

Two American kestrels (*Falco sparverius*) were observed within the ROW. Due to the time of year, it could not be determined if the species observed was the listed (threatened) subspecies, the southeastern American kestrel (*Falco sparverius paulus*). The southeastern American kestrel is found throughout Florida year-round, but identification is complicated by the arrival of migrant non-listed American kestrels in the winter. Migrant kestrels generally arrive in September and depart by March; therefore, the kestrels observed could be the non-listed variety.

Three sandhill cranes were observed within the ROW. Due to time of year, it could not be determined if the species observed was the Florida sandhill crane (*Grus canadensis pratensis*), listed as threatened by the FFWCC, or the non-listed, migrant, greater sandhill crane (*G. canadensis tabida*), which generally arrives in October and departs by March. The two subspecies are indistinguishable, so identification is largely dependent on the time of year the cranes are observed. The Florida sandhill crane is found throughout Florida year-round in prairies, freshwater marshes, and pastures. Based on the presence of Florida sandhill cranes' preferred habitat, it can reasonably be assumed that they inhabit the ROW.

Bald eagles (*Haliaeetus leucocephalus*) were observed flying overhead within the ROW. The bald eagle was removed from the USFWS endangered species list on June 28, 2007 and is no longer protected under the Endangered Species Act, but remains protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act (U.S. Department of Interior, 2007). The bald eagle has been delisted by the FFWCC through adoption of the Bald Eagle Management Plan on April 9, 2008 (FFWCC, 2008). The FFWCC bald eagle management plan recommends maintaining a 660 ft buffer zone around active nests, with certain activities allowable within between 330 and 660 ft of an active nest outside of the nesting season.

The FFWCC bald eagle nest location database (<https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx>) was queried and revealed seven nests within a 5-mile radius of the ROW:

- Nest ID PO050, located approximately 200 feet east of the transmission line ROW,
- Nest ID PO118, located approximately 2,700 feet west of the transmission line ROW,
- Nest ID PO204, located approximately 1.5 miles east of the transmission line ROW,

- Nest ID PO064, located approximately one mile south of the transmission line ROW,
- Nest ID PO153, located approximately one mile southeast of the transmission line ROW,
- Nest ID PO193, located approximately 3.4 miles south of the transmission line ROW, and
- Nest ID PO128, located approximately 4 ½ miles southeast of the transmission line ROW.

The ROW is well outside the primary protection zone (660') for 6 of the 7 nests; but one nest, PO050, is located approximately 200 feet east of the transmission line ROW between Structures 18 and 19. According to FFWCC bald eagle nest locator data, this nest was active in 2003 and 2007, and last surveyed in 2008 (FFWCC, 2011). OUC will consult with the FFWCC to determine appropriate strategies to avoid adverse impacts to the nest in accordance with the FFWCC Bald Eagle Management Plan, which may include scheduling construction activities in the vicinity of Structure 18 during the summer, outside of the nesting season (October 1st to May 15th).

The FNAI database search revealed no occurrences of listed species within the transmission line ROW. The nearest occurrences were of a blue tailed mole skink (*Eumeces egregius lividus*) and a bird rookery containing little blue heron (*Egretta caerulea*), snowy egret (*Egretta thula*), and great egret (*Ardea alba*), approximately 500 and 750 feet from the transmission line ROW, respectively (see Figures 4-0 through 4-4).

Non-listed wildlife either directly observed, observed through tracks, scat, and/or burrows, or likely to occur based upon habitat present include, but are not limited to, coyote (*Canis latrans*), feral hog (*Sus scrofa*), white-tailed deer (*Odocoileus virginianus*), nine-banded armadillo (*Dasypus novemcinctus*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), rabbit (*Sylvilagus floridanus*), green tree frog (*Hyla cinerea*), ribbon snake (*Thamnophis sauritus*), turkey (*Meleagris gallopavo*), black vulture (*Coragyps atratus*), turkey vulture (*Cathartes aura*), osprey (*Pandion haliaetus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), swallow-tailed kite (*Elanoides forficatus*), anhinga (*Anhinga anhinga*), double-crested cormorant (*Phalacrocorax auritus*), belted kingfisher (*Cerle alcyon*), cardinal (*Cardinalis cardinalis*), American crow (*Corvus brachyrhynchos*), Northern mockingbird (*Mimus polyglottis*), catbird (*Dumetella carolinensis*), Eastern phoebe

(*Sayornis phoebe*), common ground dove (*Columbina passerina*), Northern harrier (*Circus cyaneus*), Northern bobwhite (*Colinus virginianus*), killdeer (*Charadrius vociferous*), loggerhead shrike (*Lanius ludovicianus*), mourning dove (*Zenadia macroura*), Eastern meadowlark (*Sturnella magna*), brown thrasher (*Toxostoma rufum*), cattle egret (*Bulbucis ibis*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), muscovy duck (*Cairina moschata*), and mallard (*Anas platyrhynchos*).

3.3 Wetland Functional Assessment

Wetlands associated with the existing transmission line ROW are of variable quality, with areas of relatively undisturbed natural systems as well as highly disturbed wetlands with altered hydrologic regimes, soils, and vegetative communities. Wetland functional value is influenced by the surrounding landscape characteristics along the ROW, which include residential subdivisions, commercial and industrial areas, recreational lands, extractive land, institutional areas, cropland and pastureland, utilities, roads/highways, and disturbed lands (see Figures 5-1 through 5-3). Overall, the wetlands located within the ROW are of relatively low quality; although a few parcels of cypress and mixed wetland hardwoods exist that have relatively high value along the ROW. Peruvian primrose willow, Brazilian pepper, bahiagrass, torpedo grass, cattail, and other nuisance and/or exotic plant species are present within some wetlands in the ROW. Hydrologic alteration (ditching and reservoirs) is common. The following describes the rationale for the functional assessment scores for the Location and Landscape Support, Water Environment, and Community Structure variables, in accordance with the protocol outlined in 62-345 F.A.C., as well as a summary of the total credits required for mitigation. UMAM worksheets for each habitat type and individual parameter scores are located in Appendix D.

Location and landscape support

Much of the landscape surrounding the transmission line ROW is comprised of pastureland, disturbed lands, residential areas, and roads/highways (I-4). These urban land uses reduce the quality of wildlife habitat, upland buffers, and hydrologic connections. Other significant landscape features adjacent to the ROW include the Teneroc Fish Management Area and the McIntosh Plant. For the Location and Landscape Support variable, the following scores were assigned, in descending order:

- Cypress (FLUCFCS 621) – 7
- Stream/Mixed Wetland Hardwoods/Freshwater Marsh (FLUCFCS 510/617/641) - 7

- Freshwater Marshes (FLUCFCS 641) – 6
- Wet Prairies (FLUCFCS 643) – 6
- Wetland Scrub (FLUCFCS 631) – 6
- Reservoirs (FLUCFCS 534) – 4
- Ditches (FLUCFCS 511) – 4

Water Environment

Wetlands within the ROW experience a moderately disturbed hydrologic regime, with impact to the timing, frequency, depth, and duration of inundation due to the existing transmission line access roads, structure pads, adjacent roadways, and residential and agricultural development. Scores for the Water Environment variable were assigned as follows:

- Cypress (FLUCFCS 621) – 7
- Wet Prairies (FLUCFCS 643) – 7
- Stream/Mixed Wetland Hardwoods/Freshwater Marsh (FLUCFCS 510/617/641) - 7
- Freshwater Marshes (FLUCFCS 641) – 7
- Wetland Scrub (FLUCFCS 631) – 6
- Reservoirs (FLUCFCS 534) – 5
- Ditches (FLUCFCS 511) – 5

Community Structure (Vegetation and structural habitat)

Freshwater marsh, wet prairie, and wetland scrub systems within the transmission line ROW are dominated by a diverse assemblage of native species, although some nuisance vegetation is evident, specifically bahiagrass and torpedograss. Nuisance species are a dominant feature of the vegetative community, and the overall community composition is typical of slightly disturbed conditions. The ditches and reservoirs support a dominant mix of desirable native species, although colonization by nuisance species is evident. Areas of cypress and wetland hardwood/freshwater marsh floodplain support a diverse assemblage of native species with minimal coverage by nuisance/exotic species. For the Community Structure variable, the following scores were assigned, in descending order:

- Stream/Mixed Wetland Hardwoods/Freshwater Marsh (FLUCFCS 510/617/641) - 9
- Cypress (FLUCFCS 621) – 9
- Freshwater Marshes (FLUCFCS 641) – 8
- Wet Prairies (FLUCFCS 643) – 7

- Wetland Scrub (FLUCFCS 631) – 7
- Ditches (FLUCFCS 511) – 6
- Reservoirs (FLUCFCS 534) – 5

Summary of Mitigation Credits Required

Functional assessment evaluation using the UMAM protocol resulted in scores of 0.80 for cypress (FLUCFCS 621) and the forested floodplain of the un-named creek (FLUCFCS 510/617/641), 0.70 for freshwater marsh (FLUCFCS 641), 0.67 for wet prairie (FLUCFCS 643), 0.63 for wetland scrub (FLUCFCS 631), 0.60 for ditches (FLUCFCS 511), and 0.47 for reservoirs (FLUCFCS 534).

Using the acreage of fill impact (4.57 acres) and clearing impact (1.66 acres), the resulting number of mitigation credits required to offset the loss of wetland functions is 3.06. A summary of wetlands by habitat type, total acreage, impact acreage, UMAM score, and the resulting number of mitigation credits required is provided in Table 3.

OUC proposes to offset the loss of wetland functions associated with the proposed transmission line improvements through purchase of mitigation credits from an agency-approved regional wetland mitigation bank.

TABLES

Table 1
Orlando - Lakeland 230 kv Transmission Line
Lake Agnes to McIntosh Segment

Summary of Proposed Access Improvements

Structure Number or Area	Proposed At-Grade Road & Pad Improvements		Proposed Raised Road & Pad Improvements				Clearing		Upland Impacts			Wetland Impacts			Floodplain Impacts
	At Grade Road Length (Ft.)	At Grade Pad	Raised Road Length (Ft.)	Raised Road Depth (Ft.)	Pad Type	Raised Pad Depth (Ft.)	Upland Clearing Length (Ft)	Forested Wetland Clearing Length (Ft)	Filling (AC)	Filling (Cu. Yds.)	Forested Upland Clearing (AC)	Filling (AC)	Filling (Cu. Yds.)	Forested Wetland Clearing (AC)	Filling (Cu. Yds.)
Lake Agnes to McIntosh Segment															
62B															
62A															
62															
62-61	100								0.05						
61															
61-60	270								0.12						
AOC-1															
60					Pad-3	2			0.18	544		0.09	257		(801)
59															801
59-58	330								0.15						
58		Pad-2							0.30						
57		Pad-2							0.30						
58-57	700								0.32						
57-56	300								0.14						
56															
55															
55-54	300						500		0.14		0.52				
54															
54-53	800						500		0.37		0.52				
53		Pad-2							0.30						
53-52	730								0.34						
52		Pad-2							0.30						
52-51	760								0.35						
51		Pad-2							0.30						
51-50	740								0.34						
50		Pad-2							0.30						
50-49	640								0.29						

Table 1
Orlando - Lakeland 230 kv Transmission Line
Lake Agnes to McIntosh Segment

Summary of Proposed Access Improvements

Structure Number or Area	Proposed At-Grade Road & Pad Improvements		Proposed Raised Road & Pad Improvements				Clearing		Upland Impacts			Wetland Impacts			Floodplain Impacts
	At Grade Road Length (Ft.)	At Grade Pad	Raised Road Length (Ft.)	Raised Road Depth (Ft.)	Pad Type	Raised Pad Depth (Ft.)	Upland Clearing Length (Ft)	Forested Wetland Clearing Length (Ft)	Filling (AC)	Filling (Cu. Yds.)	Forested Upland Clearing (AC)	Filling (AC)	Filling (Cu. Yds.)	Forested Wetland Clearing (AC)	Filling (Cu. Yds.)
50-49			150	2					0.07	178					178
AOC-2															(1,768)
49					Pad-2	2			0.24	727		0.11	318		1,045
49-48			460	2					0.19	491		0.02	55		545
49-48	360								0.17						
48					Pad-4	3			0.37	1,053		0.31	878		0 (Note 1,
48-47	750								0.34						Page 5)
AOC-3															
47					Pad-4	3			0.34	968		0.34	693		693
47-46	750								0.34						(693)
46		Pad-2							0.30						
46-45	570						60		0.26		0.06				
46-45			200	2					0.08	201		0.01	36		
45					Pad-2	2			0.34	1,024		0.01	21		
45-44			780	2				530	0.32	832		0.04	92	0.55	
44					Pad-2	2			0.04	116		0.31	930		
44-43			480	2				380	0.17	427		0.06	142	0.39	
43															
43-42							240				0.25				
42															
41					Pad-2	2			0.12	373		0.22	672		1,045
41-40			450	2				400	0.09	237		0.11	297	0.41	107
AOC-4															(1,152)
40					Pad-4	2			0.38	1,076		0.30	855		
39															
39-38			180	1				300	0.06	84		0.01	9	0.31	
38					Pad-2	2			0.13	403		0.21	643		
37					Pad-2	2			0.32	954		0.03	91		

Table 1
Orlando - Lakeland 230 kv Transmission Line
Lake Agnes to McIntosh Segment

Summary of Proposed Access Improvements

Structure Number or Area	Proposed At-Grade Road & Pad Improvements		Proposed Raised Road & Pad Improvements				Clearing		Upland Impacts			Wetland Impacts			Floodplain Impacts
	At Grade Road Length (Ft.)	At Grade Pad	Raised Road Length (Ft.)	Raised Road Depth (Ft.)	Pad Type	Raised Pad Depth (Ft.)	Upland Clearing Length (Ft)	Forested Wetland Clearing Length (Ft)	Filling (AC)	Filling (Cu. Yds.)	Forested Upland Clearing (AC)	Filling (AC)	Filling (Cu. Yds.)	Forested Wetland Clearing (AC)	Filling (Cu. Yds.)
AOC-5															(1,045)
36					Pad-2	2			0.18	557		0.16	488		1,045
35		Pad-2			Partial Fill	2			0.25	467		0.05	90		
35-34	410								0.19						
34					Pad-3	2			0.24	725		0.03	76		
34-33	730								0.34						
AOC-6															(101)
33					Pad-2	1			0.32	505					101
33-32	680								0.31						
AOC-7															(6,490)
32					Pad-2	3			0.22	949		0.15	673		1,622
32-31	590								0.27						
31					Pad-2	3			0.22	957		0.15	666		1,622
31-30	590								0.27						
30					Pad-2	3			0.24	1,048		0.13	575		1,622
30-29	590								0.27						
29					Pad-2	3			0.29	1,291		0.08	332		1,622
29-28	590								0.27						
28					Pad-2	3			0.20	877		0.17	745		
28-27	590								0.27						
27		Pad-2							0.30						
27-26	720								0.33						
26															
26-25	830								0.38						
25															
25-24	300								0.14						
24		Blade Off													
24-23															

Table 1
Orlando - Lakeland 230 kv Transmission Line
Lake Agnes to McIntosh Segment

Summary of Proposed Access Improvements

Structure Number or Area	Proposed At-Grade Road & Pad Improvements		Proposed Raised Road & Pad Improvements				Clearing		Upland Impacts			Wetland Impacts			Floodplain Impacts
	At Grade Road Length (Ft.)	At Grade Pad	Raised Road Length (Ft.)	Raised Road Depth (Ft.)	Pad Type	Raised Pad Depth (Ft.)	Upland Clearing Length (Ft)	Forested Wetland Clearing Length (Ft)	Filling (AC)	Filling (Cu. Yds.)	Forested Upland Clearing (AC)	Filling (AC)	Filling (Cu. Yds.)	Forested Wetland Clearing (AC)	Filling (Cu. Yds.)
23															
22															
22		Pad 3							0.17			0.06			
22-21	780								0.36						
21		Pad-2							0.30						
21-20	680								0.31						
AOC-8															(375)
20					Pad-3	3			0.23	1,010		0.06	238		375
20-19	780								0.36						
19															
19-18	630								0.29						
19-18			110	1					0.04	51		0.00	6		57
AOC-9															(2,309)
18					Pad-2	1			0.08	126		0.24	379		505
17					Pad-2	3			0.10	426		0.27	1,196		1,622
17-16			480	1					0.16	224		0.02	25		124
16		Pad-2							0.30						
16-15	960								0.44						
15		Pad-2							0.30						
14		Pad-2							0.27			0.03			
14-13			790	1											
AOC-10															(811)
13					Pad-2	3			0.23	997		0.14	625		811
13-12			400	1					0.15	207					
13-12	390								0.18						
12		Pad-2							0.30						
12-11	700								0.32						
11					Pad-2	2			0.19	565		0.16	480		

Table 1
Orlando - Lakeland 230 kv Transmission Line
Lake Agnes to McIntosh Segment

Summary of Proposed Access Improvements

Structure Number or Area	Proposed At-Grade Road & Pad Improvements		Proposed Raised Road & Pad Improvements				Clearing		Upland Impacts			Wetland Impacts			Floodplain Impacts
	At Grade Road Length (Ft.)	At Grade Pad	Raised Road Length (Ft.)	Raised Road Depth (Ft.)	Pad Type	Raised Pad Depth (Ft.)	Upland Clearing Length (Ft)	Forested Wetland Clearing Length (Ft)	Filling (AC)	Filling (Cu. Yds.)	Forested Upland Clearing (AC)	Filling (AC)	Filling (Cu. Yds.)	Forested Wetland Clearing (AC)	Filling (Cu. Yds.)
11-10			780	2					0.04	92		0.32	832		
10					Pad-3	3			0.21	922		0.08	326		
10-9	760								0.35						
9		Pad-2							0.20			0.10			
9-8A	210								0.10						
8A															
8															
7															
6															
5															
4															
3															
2															
McIntosh Sub															
Segment Subtotal	20,610	17	5,260		25		1300	1610	20.75	21,687	1.34	4.57	13,741	1.66	0

Note 1: FDOT determined that the retention pond at Structure 48 had sufficient spare retention capacity to accommodate the proposed structure pad. There is no net impact to the floodplain created by the proposed construction.

Total Floodplain Impact 15,545
Total Compensating Storage Created (15,545)

Ecological Assessment

McIntosh Plant to Lake Agnes Substation Transmission Line Maintenance

Table 2. Threatened, Endangered, and Species of Special Concern Known to Occur in Polk County, Florida.

Scientific Name	Common Name	Federal Status	State Status
<u>Plants</u>			
<i>Bonamia grandiflora</i>	Florida Bonamia	LT	LE
<i>Calamintha ashei</i>	Ashe's Savory	N	LT
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	N	LE
<i>Chionanthus pygmaeus</i>	Pygmy Fringe Tree	LE	LE
<i>Cladonia perforata</i>	Perforate Reindeer Lichen	LE	LE
<i>Clitoria fragrans</i>	Scrub Pigeon-wing	LT	LE
<i>Coelorachis tuberculosa</i>	Piedmont Jointgrass	N	LT
<i>Conradina brevifolia</i>	Short-leaved Rosemary	LE	LE
<i>Crotalaria avonensis</i>	Avon Park Rabbit-bells	LE	LE
<i>Dicerandra frutescens</i>	Scrub Mint	LE	LE
<i>Drosera intermedia</i>	Spoon-leaved Sundew	N	LT
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub Buckwheat	LT	LE
<i>Hartwrightia floridana</i>	Hartwrightia	N	LT
<i>Hypericum cumulicola</i>	Highlands Scrub Hypericum	LE	LE
<i>Hypericum edisonianum</i>	Edison's Ascyrum	N	LE
<i>Illicium parviflorum</i>	Star Anise	N	LE
<i>Lechea cernua</i>	Nodding Pinweed	N	LT
<i>Lechea divaricata</i>	Pine Pinweed	N	LE
<i>Liatris ohlingerae</i>	Florida Blazing Star	LE	LE
<i>Lupinus aridorum</i>	Scrub Lupine	LE	LE
<i>Matelea floridana</i>	Florida Spiny-pod	N	LE
<i>Nemastylis floridana</i>	Celestial Lily	N	LE
<i>Nolina brittoniana</i>	Britton's Beargrass	LE	LE
<i>Ophioglossum palmatum</i>	Hand Fern	N	LE
<i>Panicum abscissum</i>	Cutthroat Grass	N	LE
<i>Paronychia chartacea</i> ssp. <i>chartacea</i>	Paper-like Nailwort	LT	LE
<i>Peperomia humilis</i>	Terrestrial Peperomia	N	LE
<i>Platanthera integra</i>	Yellow Fringeless Orchid	N	LE
<i>Polygala lewtonii</i>	Lewton's Polygala	LE	LE
<i>Polygonella basiramia</i>	Florida Jointweed	LE	LE
<i>Polygonella myriophylla</i>	Small's Jointweed	LE	LE
<i>Prunus geniculata</i>	Scrub Plum	LE	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	N	LT
<i>Salix floridana</i>	Florida Willow	N	LE
<i>Schizachyrium niveum</i>	Scrub Bluestem	N	LE
<i>Stylisma abdita</i>	Scrub Stylisma	N	LE
<i>Thelypteris serrata</i>	Toothed Maiden Fern	N	LE
<i>Warea amplexifolia</i>	Clasping Warea	LE	LE
<i>Warea carteri</i>	Carter's Warea	LE	LE
<i>Ziziphus celata</i>	Scrub Ziziphus	LE	LE
<u>Amphibians</u>			
<i>Rana capito</i>	Gopher Frog	N	LS

Ecological Assessment

McIntosh Plant to Lake Agnes Substation Transmission Line Maintenance

Table 2. Threatened, Endangered, and Species of Special Concern Known to Occur in Polk County, Florida.

Scientific Name	Common Name	Federal Status	State Status
<u>Reptiles</u>			
<i>Alligator mississippiensis</i>	American Alligator	SAT	LS
<i>Drymarchon couperi</i>	Eastern Indigo Snake	LT	LT
<i>Eumeces egregius lividus</i>	Blue-tailed Mole Skink	LT	LT
<i>Gopherus polyphemus</i>	Gopher Tortoise	N	LT
<i>Neoseps reynoldsi</i>	Sand Skink	LT	LT
<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	N	LS
<i>Pseudemys concinna suwanniensis</i>	Suwannee Cooter	N	LS
<i>Stilosoma extenuatum</i>	Short-tailed Snake	N	LT
<u>Birds</u>			
<i>Ammodramus savannarum floridanus</i>	Florida Grasshopper Sparrow	LE	LE
<i>Aphelocoma coerulescens</i>	Florida Scrub-jay	LT	LT
<i>Aramus guarauna</i>	Limpkin	N	LS
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	N	LS
<i>Caracara cheriway</i>	Crested Caracara	LT	LT
<i>Egretta caerulea</i>	Little Blue Heron	N	LS
<i>Egretta thula</i>	Snowy Egret	N	LS
<i>Egretta tricolor</i>	Tricolored Heron	N	LS
<i>Eudocimus albus</i>	White Ibis	N	LS
<i>Falco peregrinus</i>	Peregrine Falcon	N	LE
<i>Falco sparverius paulus</i>	Southeastern American Kestrel	N	LT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	N	LT
<i>Haliaeetus leucocephalus</i>	Bald Eagle	N	LT
<i>Mycteria americana</i>	Wood Stork	LE	LE
<i>Picoides borealis</i>	Red-cockaded Woodpecker	LE	LS
<i>Platalea ajaja</i>	Roseate Spoonbill	N	LS
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	LE	LE
<i>Rynchops niger</i>	Black Skimmer	N	LS
<i>Sterna antillarum</i>	Least Tern	N	LT
<u>Mammals</u>			
<i>Podomys floridanus</i>	Florida Mouse	N	LS
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	N	LS
<i>Ursus americanus floridanus</i>	Florida Black Bear	N	LT

Source:

FNAI Tracking List, 2008.

Table 3. OUC McIntosh Substation – Lake Agnes Substation Wetland Summary

Wetland ID	FLUCFCS	Total Acreage	Fill Impact Acreage	Clearing Impact Acreage	UMAM	Functional Loss (Credits)
4A	511	0.08	0	0	0.50	0
4B	511	0.03	0	0	0.50	0
6A	631	0.36	0	0	0.63	0
8A	534	0.35	0	0	0.47	0
8B	641	0.35	0.1	0	0.70	0.070
9A-11A	641	6.26	0.56	0	0.70	0.392
12A	641	4.77	0.14	0	0.70	0.098
13C	641	0.03	0.03	0	0.70	0.021
14A/14B	534	0.50	0	0	0.47	0
16A-18A	641	9.07	0.53	0	0.70	0.371
19A	641	0.09	0.06	0	0.70	0.042
22A/B	641	0.36	0	0	0.70	0
23A	534	0.90	0.06	0	0.47	0.028
23B	534	0.83	0	0	0.47	0
26A	534	0.31	0	0	0.47	0
27A	511	6.20	0.09	0	0.50	0.045
27B	641	2.84	0.23	0	0.70	0.161
29A	641	4.43	0.36	0	0.70	0.252
33A	641	0.08	0	0	0.70	0
33B	641	0.39	0.01	0	0.70	0.007
34A	643	0.03	0.01	0	0.67	0.007
34B	641	0.24	0	0	0.70	0
34C	643	0.01	0.01	0	0.67	0.007
35A	511	0.08	0.01	0	0.50	0.005
35B	641	2.32	0.16	0	0.70	0.112
35C	641	1.91	0	0	0.70	0
35D	641	0.71	0.04	0	0.70	0.028
36A	511	0.05	0	0	0.50	0
36B	643	0.02	0	0	0.67	0
36C	643	0.08	0	0	0.67	0
37A	621	0.52	0.09	0.31	0.80	0.165
37B	641	0.38	0.13	0	0.70	0.091
37C	643	0.05	0	0	0.67	0
37D	511	0.04	0.03	0	0.50	0.015
39A	641	0.10	0	0	0.70	0
39	534	1.63	0.3	0	0.47	N/A
40A/B	510/617/641	2.24	0.33	0.41	0.80	0.387

Table 3. OUC McIntosh Substation – Lake Agnes Substation Wetland Summary

Wetland ID	FLUCFCS	Total Acreage	Fill Impact Acreage	Clearing Impact Acreage	UMAM	Functional Loss (Credits)
43A	621	1.26	0.02	0.39	0.80	0.133
43B	641	2.94	0.36	0	0.70	0.252
44A	511	0.33	0.01	0	0.50	0.005
44B	621	1.99	0.03	0.55	0.80	0.189
45A	511	0.07	0.01	0	0.50	0.005
46B	534	1.66	0.34	0	0.47	N/A
46C	534	1.78	0.31	0	0.47	N/A
47A	641	0.03	0	0	0.70	0
48A	511	0.63	0	0	0.50	0
48B	641	1.31	0.03	0	0.70	0.021
48C	641	0.04	0.04	0	0.70	0.028
49A	511	0.18	0.06	0	0.50	0.030
49B	534	0.26	0	0	0.47	0
54A	511	0.32	0	0	0.50	0
54B	511	0.09	0	0	0.50	0
54C	511	0.03	0	0	0.50	0
60A	511	0.26	0	0	0.50	0
60B	641	0.3	0.01	0	0.70	0.007
60C	641	0.12	0.07	0	0.70	0.049
TOTAL		62.23	4.57	1.66		3.02

Ecological Assessment
McIntosh Plant to Lake Agnes Substation Transmission Line Maintenance
Table 4. Gopher Tortoise Burrow Locations and Status

Burrow Number	Latitude (N)	Longitude (W)	Status
1	28.154605	-81.837201	Active
2	28.154316	-81.837351	Inactive
3	28.154221	-81.837345	Active
4	28.154453	-81.837418	Disturbed
5	28.154532	-81.837591	Active
6	28.154270	-81.837928	Active
7	28.154467	-81.837757	Active
8	28.153735	-81.838786	Active
9	28.153824	-81.840549	Active
10	28.153796	-81.840721	Active
11	28.153816	-81.840589	Active
12	28.153797	-81.841044	Active
13	28.153794	-81.841150	Active
14	28.153789	-81.841752	Active
15	28.153797	-81.841783	Active
16	28.153797	-81.841838	Active
17	28.153801	-81.842107	Active
18	28.153793	-81.842181	Active
19	28.153488	-81.845000	Active
20	28.153327	-81.845537	Active
21	28.124387	-81.919787	Active
22	28.122535	-81.919680	Active
23	28.122309	-81.919693	Active
24	28.121587	-81.919477	Active
25	28.121572	-81.919885	Active
26	28.120908	-81.919628	Active
27	28.120435	-81.919617	Inactive
28	28.120123	-81.919806	Active
29	28.117953	-81.919687	Active
30	28.117479	-81.919515	Active
31	28.117492	-81.919799	Active
32	28.117125	-81.919546	Active
33	28.116630	-81.919819	Active
34	28.116234	-81.919770	Active
35	28.116196	-81.919372	Active
36	28.116183	-81.919447	Inactive
37	28.116194	-81.919550	Active
38	28.116115	-81.919919	Active
39	28.115558	-81.920089	Inactive
40	28.115476	-81.920114	Inactive
41	28.115274	-81.919886	Active
42	28.115133	-81.919998	Active
43	28.114971	-81.920048	Active
44	28.114944	-81.920016	Active
45	28.114835	-81.920079	Active
46	28.114743	-81.920117	Active
47	28.114921	-81.920260	Active
48	28.110006	-81.921369	Active
49	28.109855	-81.921528	Active
50	28.109746	-81.921478	Inactive

Ecological Assessment
 McIntosh Plant to Lake Agnes Substation Transmission Line Maintenance
 Table 3. Gopher Tortoise Burrow Locations and Status (December 2007)

Burrow Number	Latitude (N)	Longitude (W)	Status
51	28.109419	-81.921374	Inactive
52	28.109460	-81.921317	Active
53	28.109334	-81.921331	inactive
54	28.109079	-81.921200	Active
55	28.108114	-81.921316	Active
56	28.107475	-81.921287	Active
57	28.107808	-81.921549	Active
58	28.099193	-81.921258	Active
59	28.099398	-81.921287	Active
60	28.099526	-81.921268	Inactive
61	28.099689	-81.921312	Inactive
62	28.099817	-81.921337	Inactive
63	28.099946	-81.921229	Active
64	28.100616	-81.921202	Active
65	28.101064	-81.921306	Active
66	28.101189	-81.921313	Active

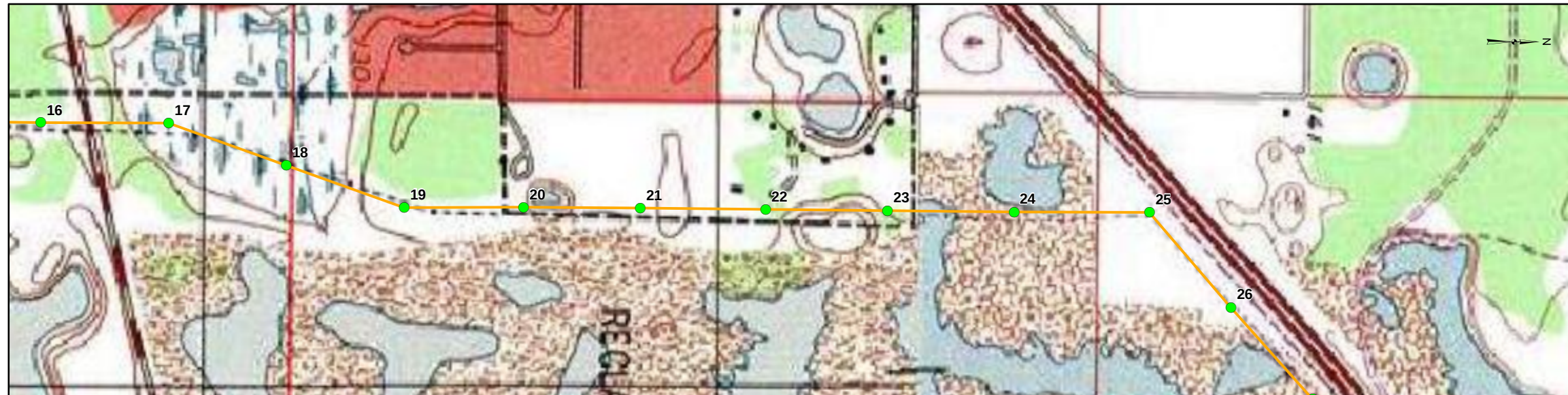
FIGURES



Sheet 1



Sheet 2

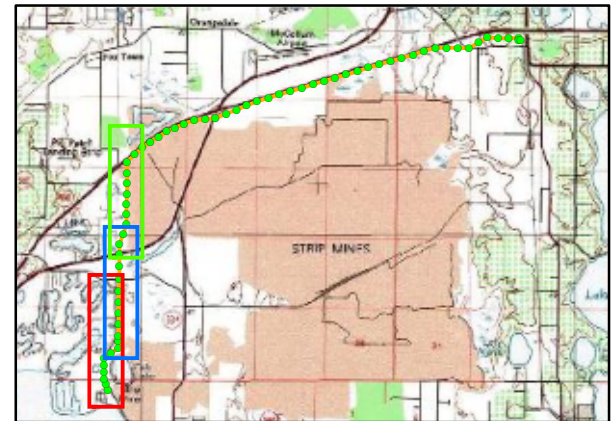


Sheet 3

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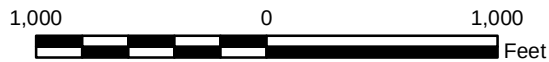
- Transmission Line Structures
- Transmission Line

AREA MAP



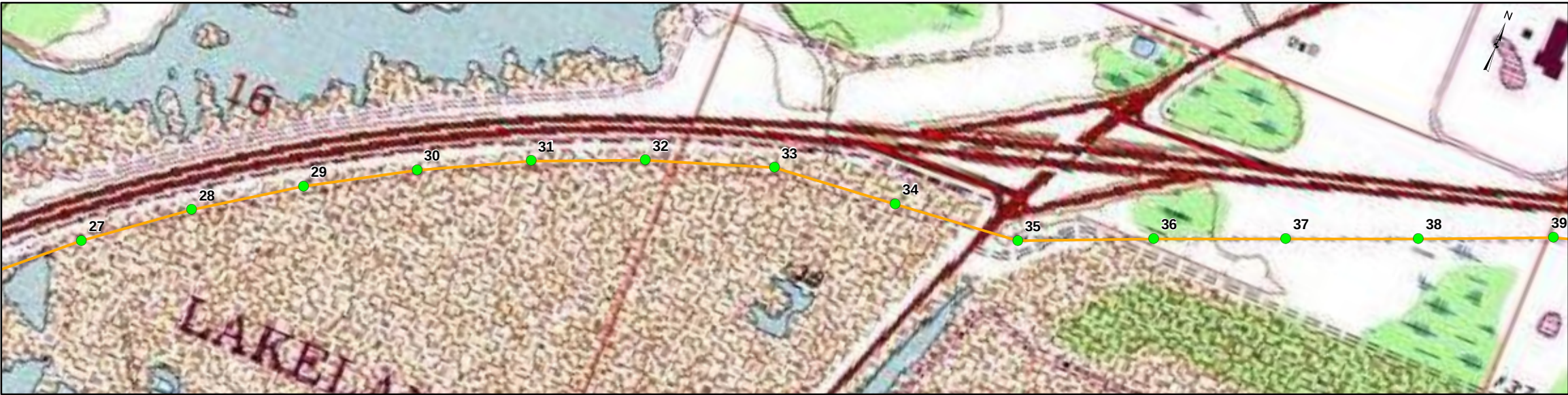
REFERENCE

USGS Lakeland & Providence (FL) Quadrangle



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	GIS	AB	17 Mar. 2008
	CHECK	KB	17 Mar. 2008
	REVIEW	KK	17 Mar. 2008
SCALE AS SHOWN			REV. 0

FIGURE 1-1



Sheet 4



Sheet 5

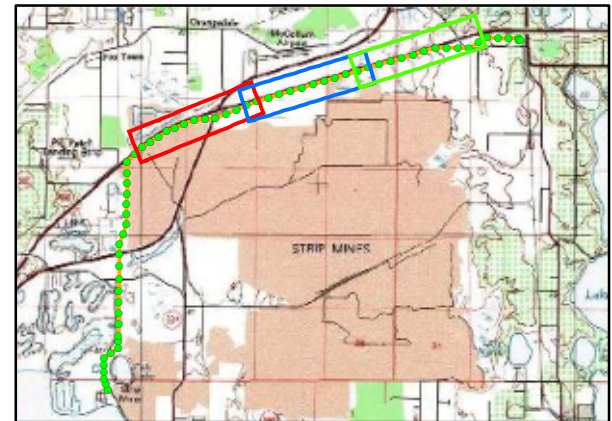


Sheet 6

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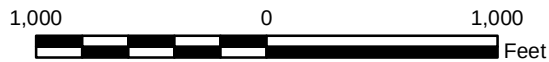
- Transmission Line Structures
- Transmission Line

AREA MAP



REFERENCE

USGS Providence (FL) Quadrangle



PROJECT			
Orlando Utilities Commission McIntosh Plant to Lake Agnes Substation Transmission Line Right-of-Way Maintenance			
TITLE			
USGS Topographic Map			
 Golder Associates Gainesville, Florida	PROJECT No. 063-7654		
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	CHECK	SR	17 Mar. 2008
	REVIEW	DB	17 Mar. 2008
SCALE AS SHOWN			REV. 0

FIGURE 1-2

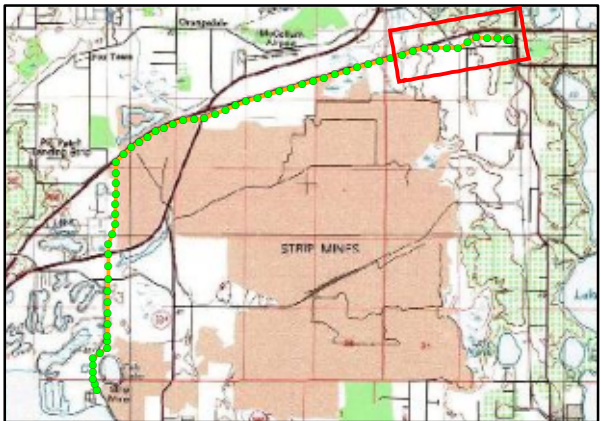
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- Transmission Line Structures
- Transmission Line



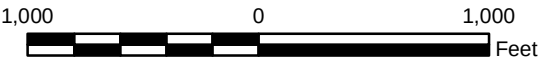
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AREA MAP



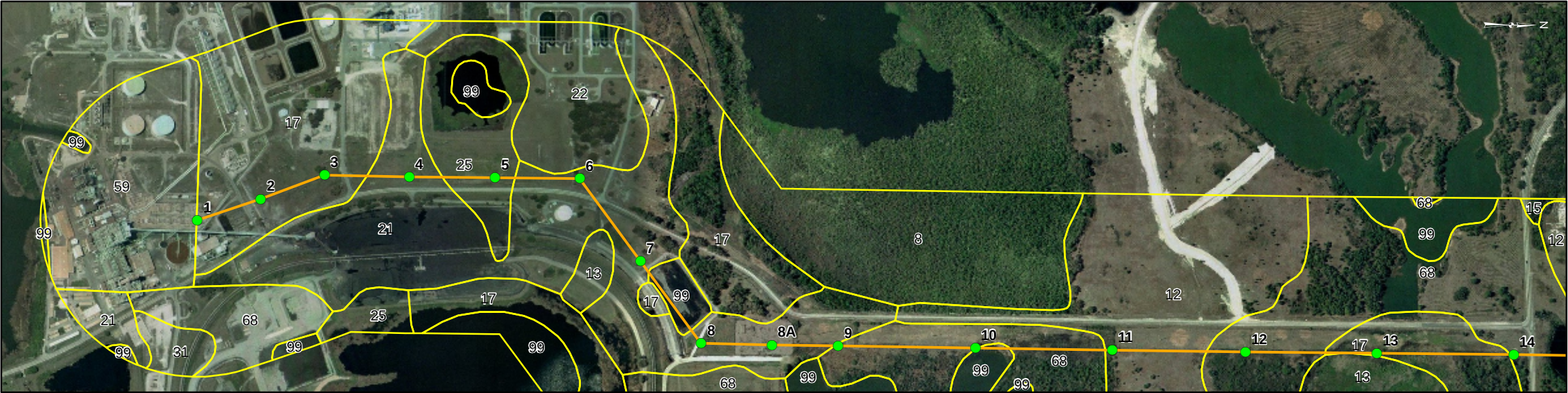
REFERENCE

USGS Providence (FL) Quadrangle

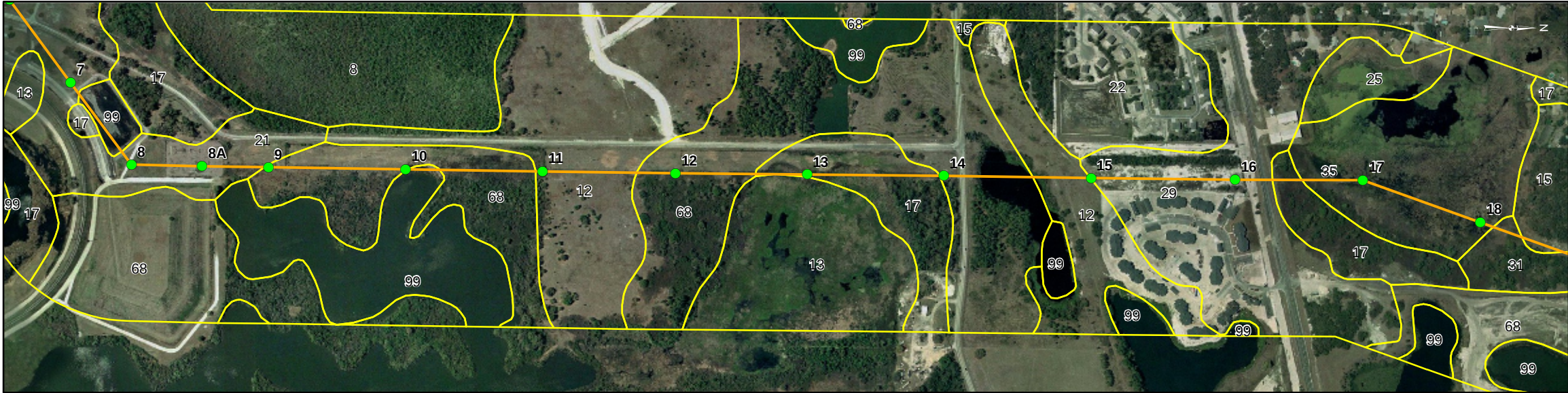


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TITLE USGS Topographic Map			
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	GIS	AB 17 Mar. 2008	
	CHECK	SR 17 Mar. 2008	
		REVIEW	KB 17 Mar. 2008

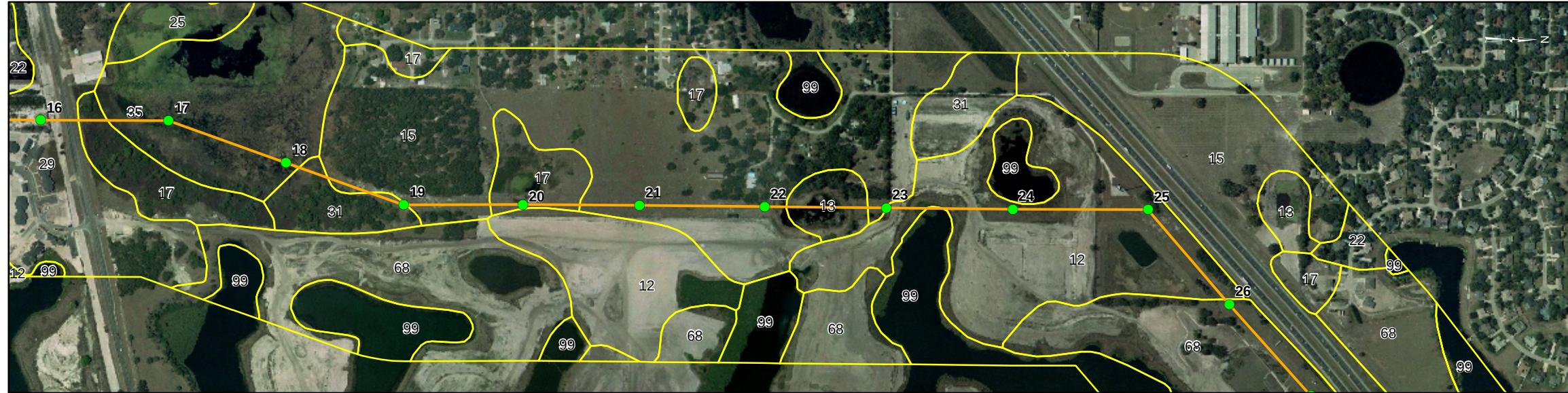
FIGURE 1-3



Sheet 1



Sheet 2



Sheet 3

LEGEND

●

Transmission Line Structures

—

Transmission Line

○

Soils

3 - CANDLER SAND, 0 TO 5 PERCENT SLOPES

6 - EATON MUCKY FINE SAND, DEPRESSIONAL

7 - POMONA FINE SAND

8 - HYDRAQUENTS, CLAYEY

9 - LYNNE SAND

11 - ARENTS-WATER COMPLEX

12 - NEILHURST SAND, 1 TO 5 PERCENT SLOPES

13 - SAMSULA MUCK

14 - SPARR SAND, 0 TO 5 PERCENT SLOPES

15 - TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES

17 - SMYRNA AND MYAKKA FINE SANDS

21 - IMMOKALEE SAND

22 - POMELLO FINE SAND

25 - PLACID AND MYAKKA FINE SANDS, DEPRESSIONAL

26 - LOCHLOOSA FINE SAND

29 - ST. LUCIE FINE SAND, 0 TO 5 PERCENT SLOPES

31 - ADAMSVILLE FINE SAND

32 - KALIGA MUCK

35 - HONTOON MUCK

36 - BASINGER MUCKY FINE SAND, DEPRESSIONAL

47 - ZOLFO FINE SAND

51 - POMONA-URBAN LAND COMPLEX

58 - UDORTHENTS, EXCAVATED

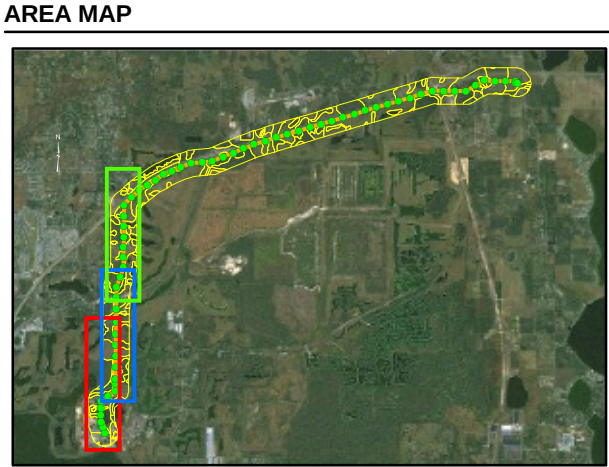
59 - ARENTS-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES

68 - ARENTS, 0 TO 5 PERCENT SLOPES

74 - NARCOOSSEE SAND

76 - MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES

99 - WATER



REFERENCE

U.S. Department of Agriculture, Natural Resources Conservation Service, 1990

1,00001,000

Feet

PROJECT

Orlando Utilities Commission McIntosh Plant to Lake Agnes Substation Transmission Line Right-of-Way Maintenance

TITLE

Soils

Golder Associates

Gainesville, Florida

PROJECT No. 063-7654

DESIGN AB 28 Mar. 2008

GIS AB 28 Mar. 2008

CHECK KB 28 Mar. 2008

REVIEW KK 28 Mar. 2008

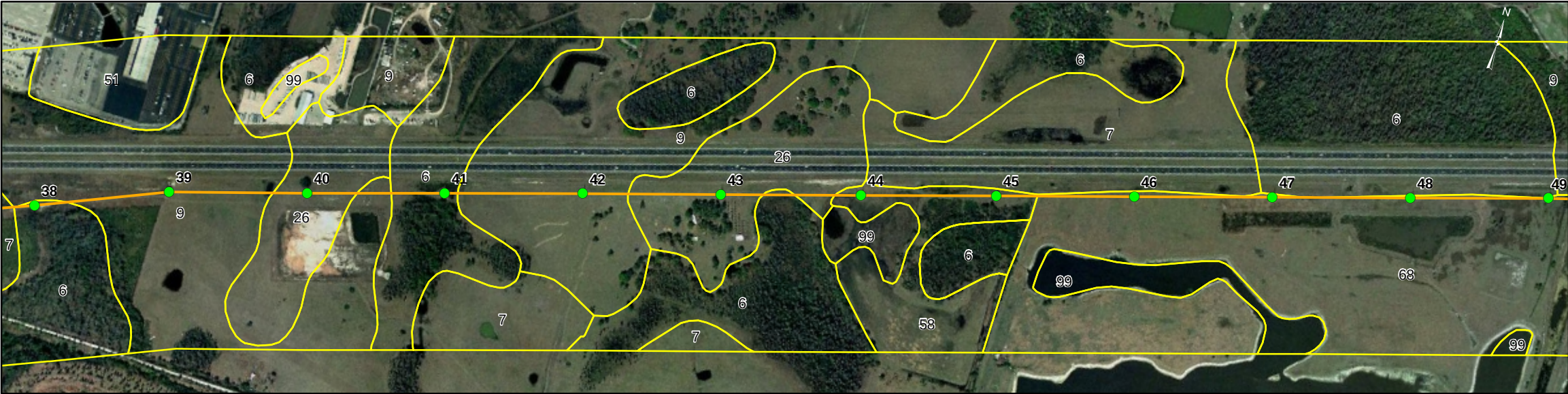
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REV. 0

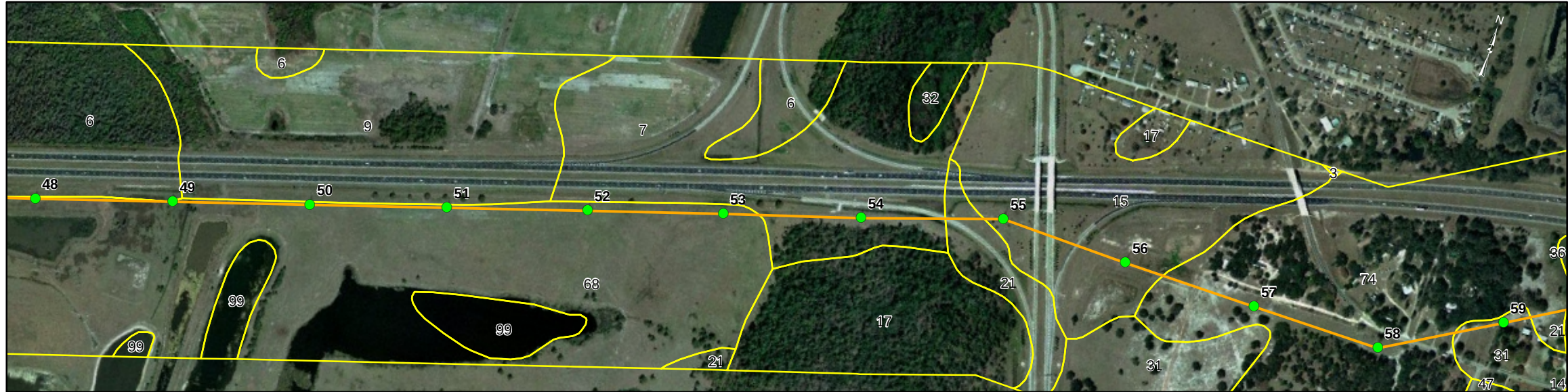
FIGURE 2-1



Sheet 4



Sheet 5

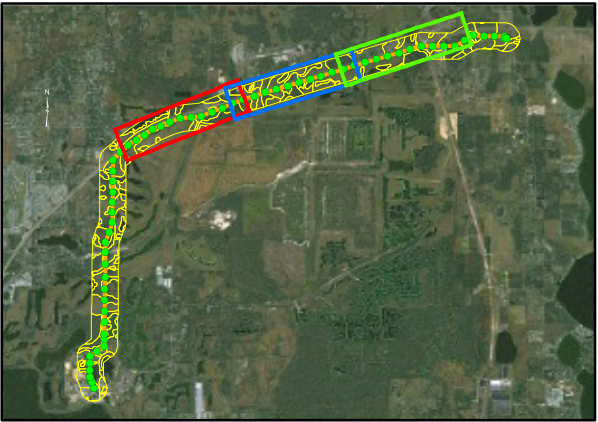


Sheet 6

LEGEND

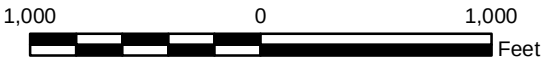
- Transmission Line Structures
- Transmission Line
- Soils
- 3 - CANDLER SAND, 0 TO 5 PERCENT SLOPES
- 6 - EATON MUCKY FINE SAND, DEPRESSIONAL
- 7 - POMONA FINE SAND
- 8 - HYDRAQUENTS, CLAYEY
- 9 - LYNNE SAND
- 11 - ARENTS-WATER COMPLEX
- 12 - NEILHURST SAND, 1 TO 5 PERCENT SLOPES
- 13 - SAMSULA MUCK
- 14 - SPARR SAND, 0 TO 5 PERCENT SLOPES
- 15 - TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES
- 17 - SMYRNA AND MYAKKA FINE SANDS
- 21 - IMMOKALEE SAND
- 22 - POMELLO FINE SAND
- 25 - PLACID AND MYAKKA FINE SANDS, DEPRESSIONAL
- 26 - LOCHLOOSA FINE SAND
- 29 - ST. LUCIE FINE SAND, 0 TO 5 PERCENT SLOPES
- 31 - ADAMSVILLE FINE SAND
- 32 - KALIGA MUCK
- 35 - HONTOON MUCK
- 36 - BASINGER MUCKY FINE SAND, DEPRESSIONAL
- 47 - ZOLFO FINE SAND
- 51 - POMONA-URBAN LAND COMPLEX
- 58 - UDORTHENTS, EXCAVATED
- 59 - ARENTS-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES
- 68 - ARENTS, 0 TO 5 PERCENT SLOPES
- 74 - NARCOOSSEE SAND
- 76 - MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
- 99 - WATER

AREA MAP



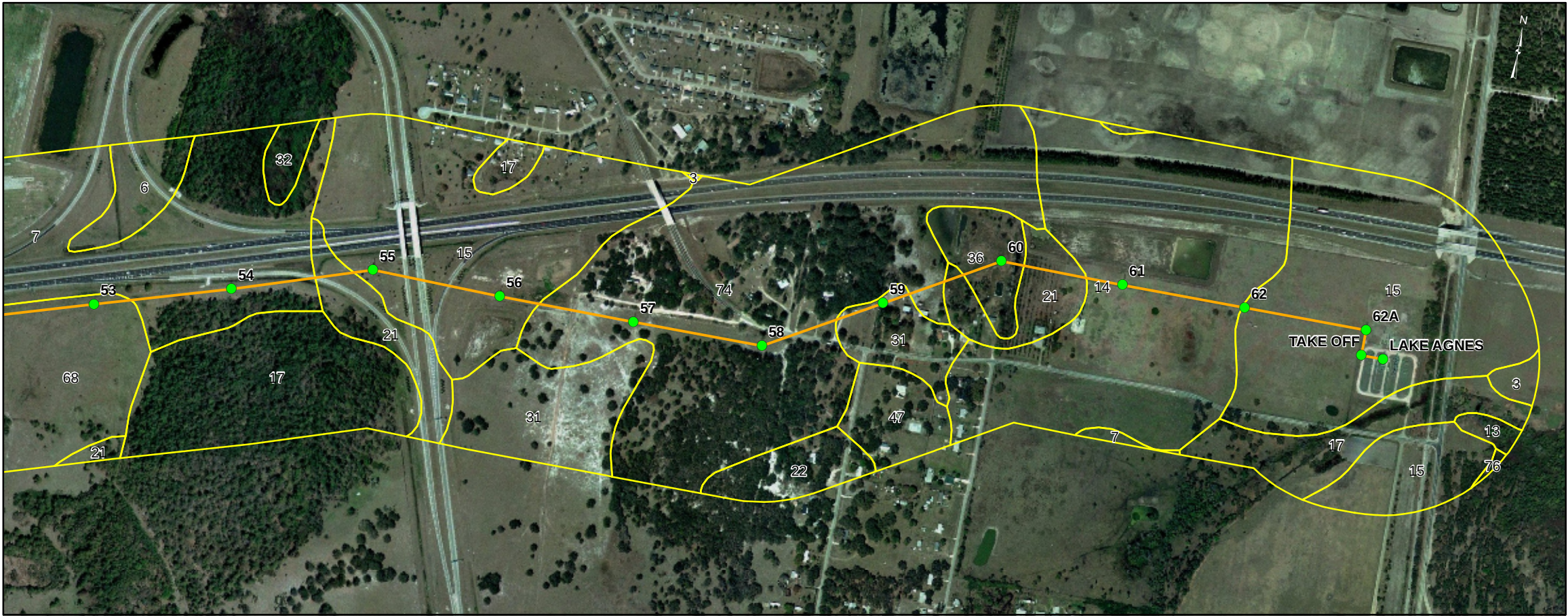
REFERENCE

Southwest Florida Water Management District, 2005



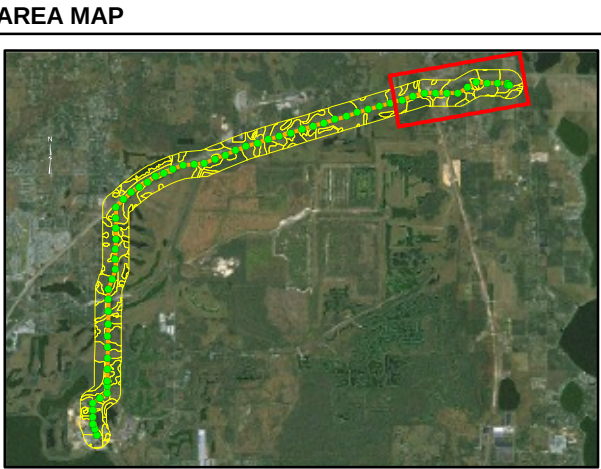
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Soils			
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	REVIEW	DB 17 Mar. 2008	

FIGURE 2-2



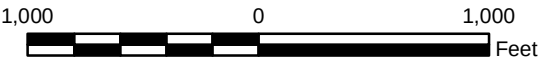
Sheet 7

- LEGEND**
- Transmission Line Structures
 - Transmission Line
 - Soils
 - 3 - CANDLER SAND, 0 TO 5 PERCENT SLOPES
 - 6 - EATON MUCKY FINE SAND, DEPRESSIONAL
 - 7 - POMONA FINE SAND
 - 8 - HYDRAQUENTS, CLAYEY
 - 9 - LYNNE SAND
 - 11 - ARENTS-WATER COMPLEX
 - 12 - NEILHURST SAND, 1 TO 5 PERCENT SLOPES
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 - 17 - SMYRNA AND MYAKKA FINE SANDS
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 - 25 - PLACID AND MYAKKA FINE SANDS, DEPRESSIONAL
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 - 68 - ARENTS, 0 TO 5 PERCENT SLOPES
 - 74 - NARCOOSSEE SAND
 - 76 - MILLHOPPER FINE SAND, 0 TO 5 PERCENT SLOPES
 - 99 - WATER



REFERENCE

U.S. Department of Agriculture, Natural Resources Conservation Service, 1990



PROJECT				
Orlando Utilities Commission McIntosh Plant to Lake Agnes Substation Transmission Line Right-of-Way Maintenance				
TITLE				
Soils				
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FIGURE 2-3



Sheet 1



Sheet 2

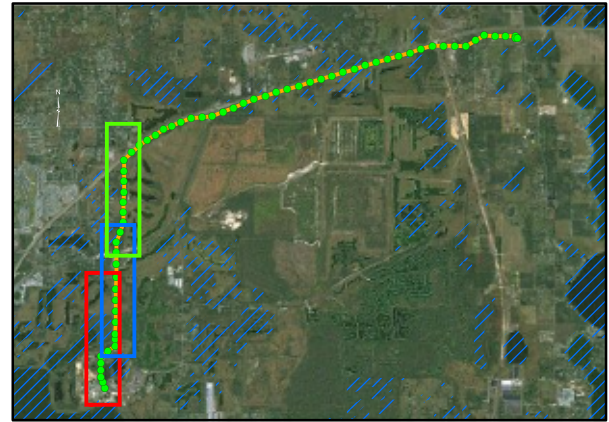


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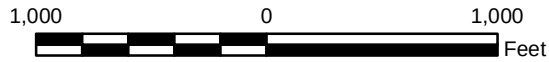
- Transmission Line Structures
- Transmission Line
- ▨ 100-Year Floodplain

AREA MAP



REFERENCE

Federal Emergency Management Agency, 1995

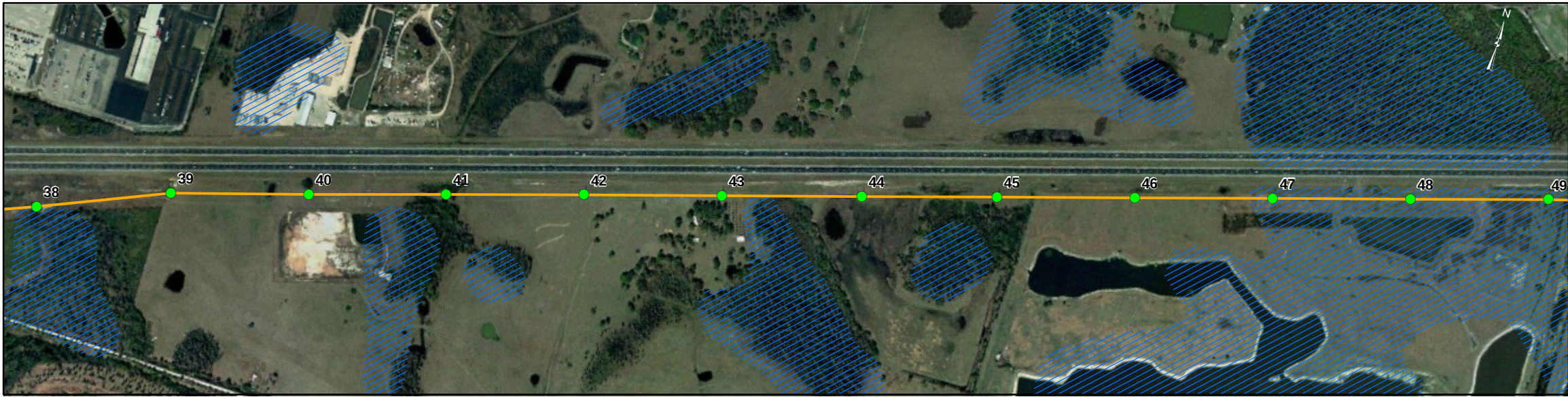


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	REVIEW	KK 17 Mar. 2008	

FIGURE 3-1



Sheet 4



Sheet 5

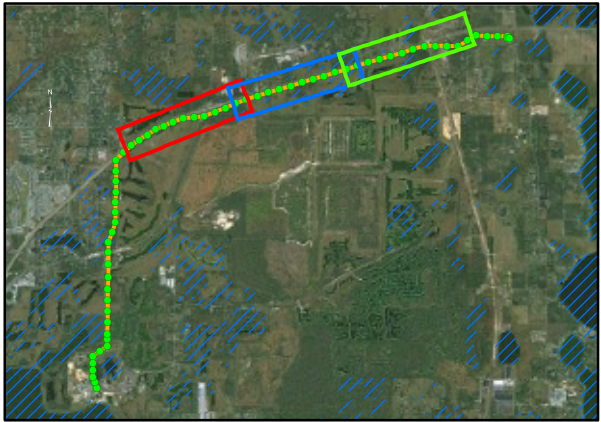


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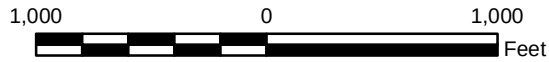
- Transmission Line Structures
- Transmission Line
- /// 100-Year Floodplain

AREA MAP



REFERENCE

Federal Emergency Management Agency, 1995



PROJECT			
Orlando Utilities Commission McIntosh Plant to Lake Agnes Substation Transmission Line Right-of-Way Maintenance			
TITLE			
Floodplain Zones			
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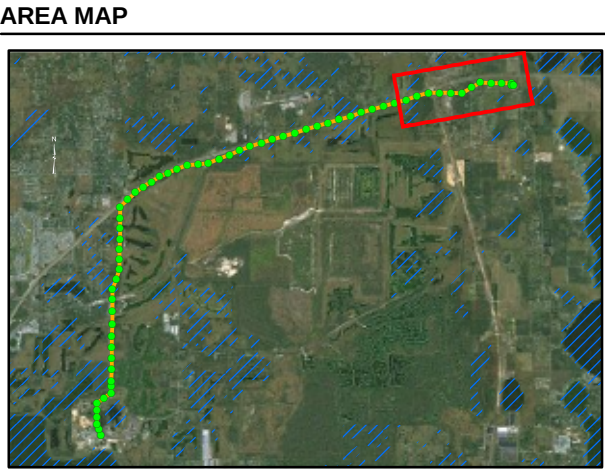
FIGURE 3-2

LEGEND

Transmission Line Structures

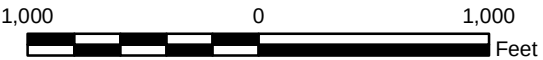
Transmission Line

100-Year Floodplain



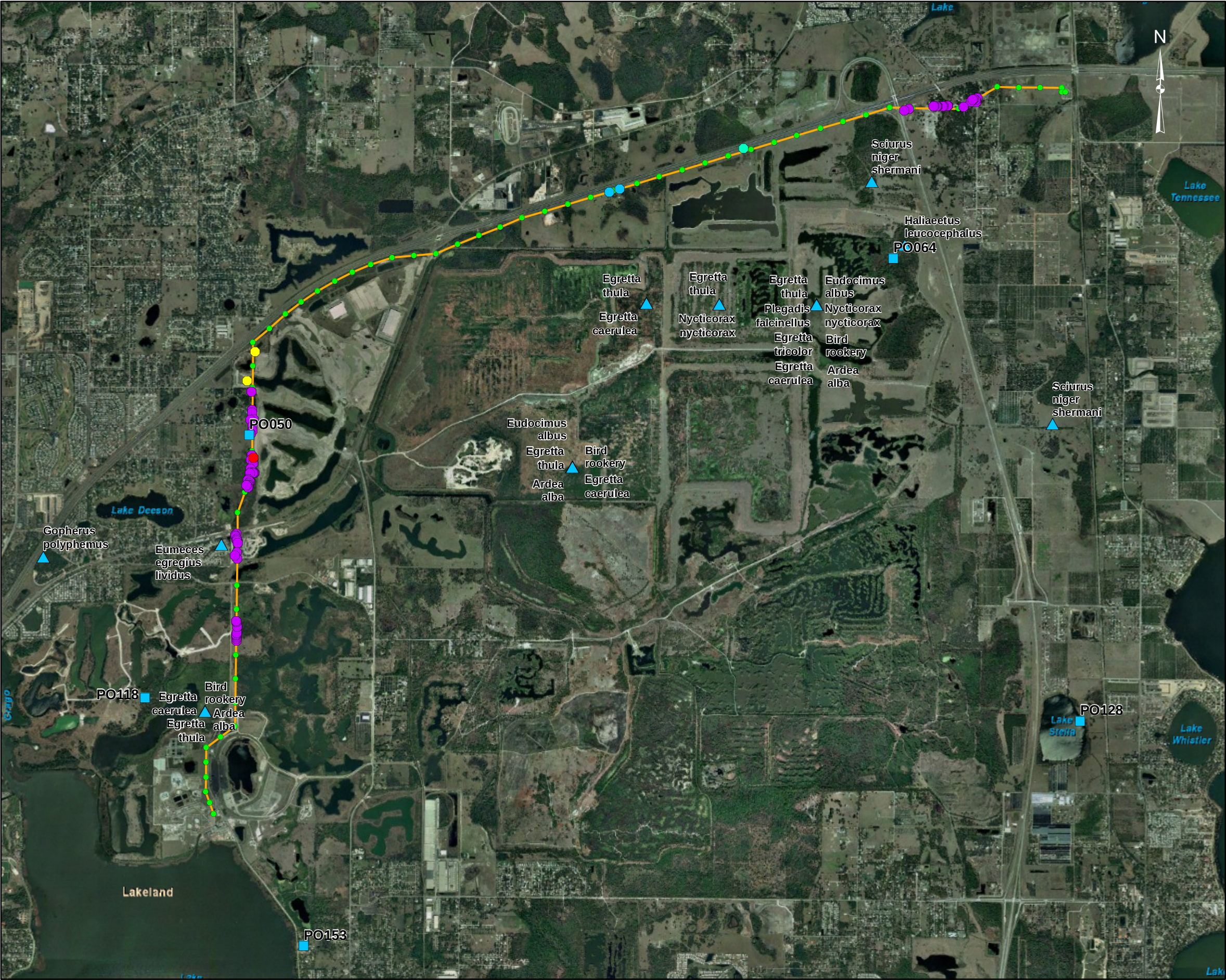
REFERENCE

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Orlando Utilities Commission McIntosh Plant to Lake Agnes Substation Transmission Line Right-of-Way Maintenance			
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FIGURE 3-3



LEGEND

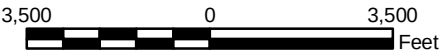
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- Transmission Line
- FFWCC Bald Eagle Nest Locations
- FNAI Listed Species Occurrences

Golder Observed Listed Species

- 3 Sandhill Cranes
- American Kestrel
- Gopher Tortoise Burrow
- Sherman's Fox Squirrel
- Woodstork

REFERENCE

Florida Fish and Wildlife Conservation Commission

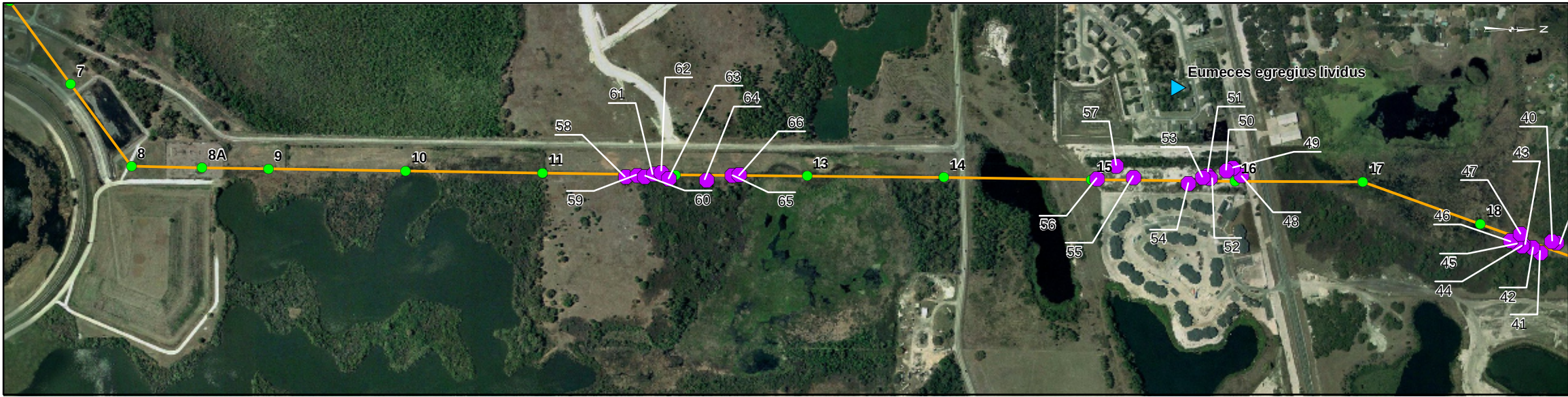


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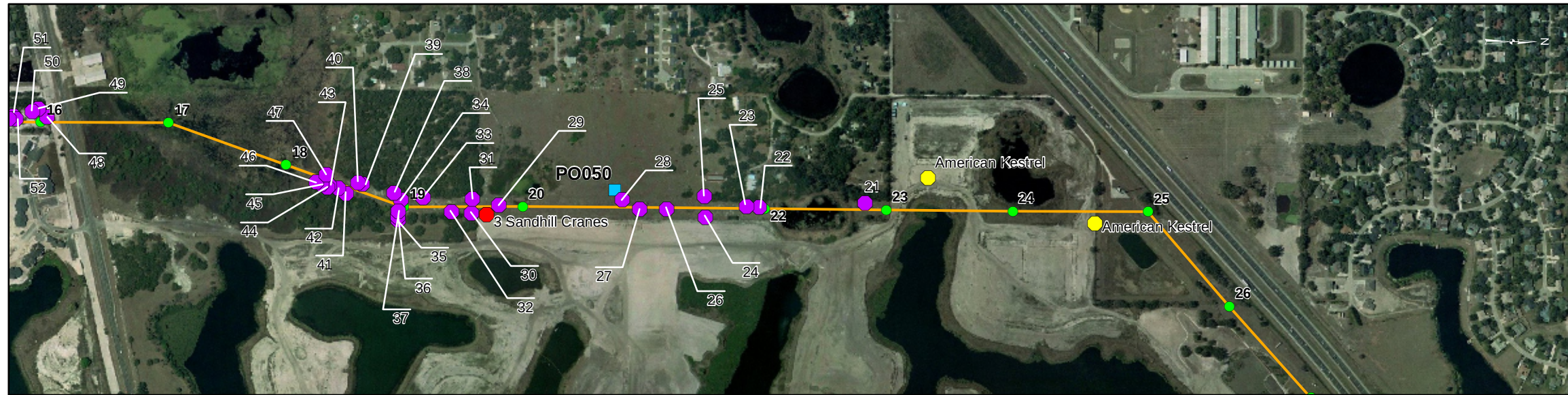
FIGURE 4-0



Sheet 1



Sheet 2

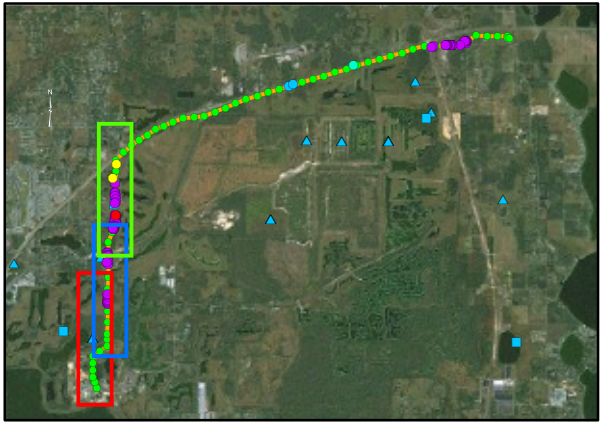


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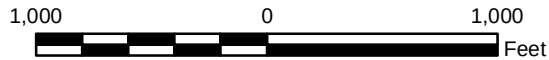
- Transmission Line Structures
- Transmission Line
- ▲ FNAI Listed Species Occurrences
- FFWCC Bald Eagle Nest Locations
- Golden Observed Listed Species**
 - 3 Sandhill Cranes
 - American Kestrel
 - Gopher Tortoise Burrow
 - Sherman's Fox Squirrel
 - Woodstork

AREA MAP



REFERENCE

Florida Fish and Wildlife Conservation Commission



PROJECT			
Orlando Utilities Commission McIntosh Plant to Lake Agnes Substation Transmission Line Right-of-Way Maintenance			
TITLE			
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			FIGURE 4-1



Sheet 4



Sheet 5

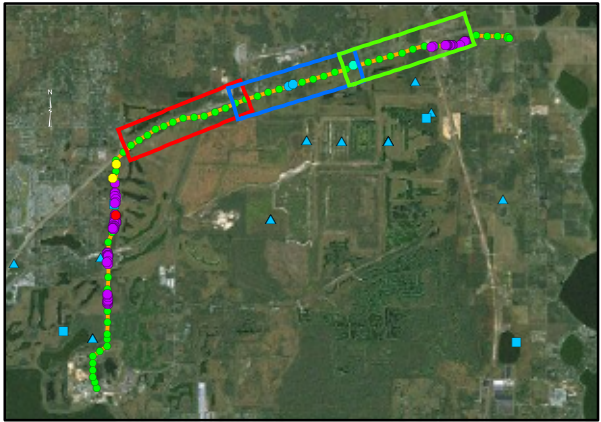


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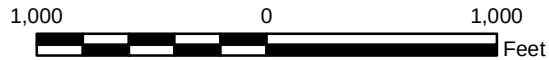
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 - FFWCC Bald Eagle Nest Locations
- Golden Observed Listed Species**
- 3 Sandhill Cranes
 - American Kestrel
 - Gopher Tortoise Burrow
 - Sherman's Fox Squirrel
 - Woodstork

AREA MAP



REFERENCE

Florida Fish and Wildlife Conservation Commission

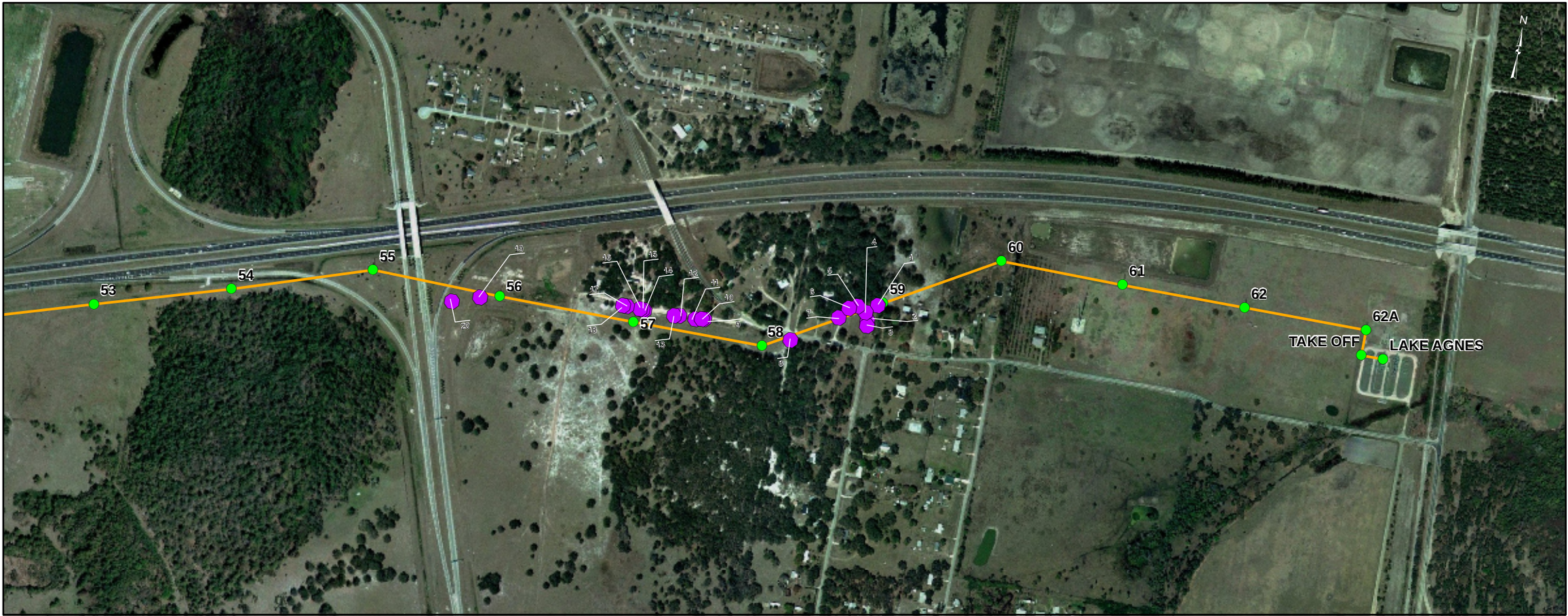


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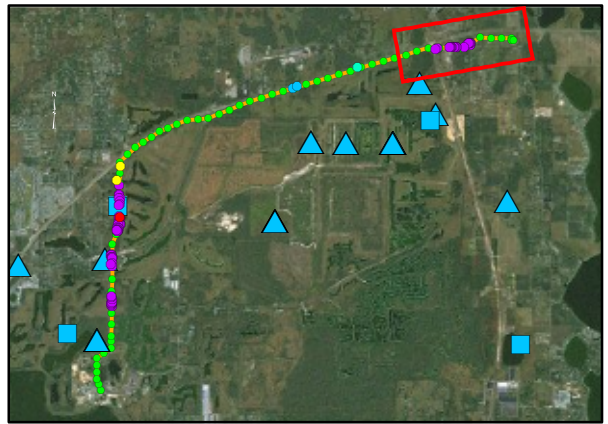
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- ▲ FNAI Listed Species Occurrences
- FFWCC Bald Eagle Nest Locations
- Golder Observed Listed Species**
 - 3 Sandhill Cranes
 - American Kestrel
 - Gopher Tortoise Burrow
 - Sherman's Fox Squirrel
 - Woodstork



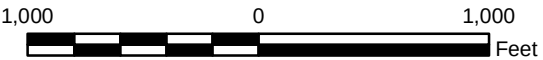
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AREA MAP



REFERENCE

Florida Fish and Wildlife Conservation Commission

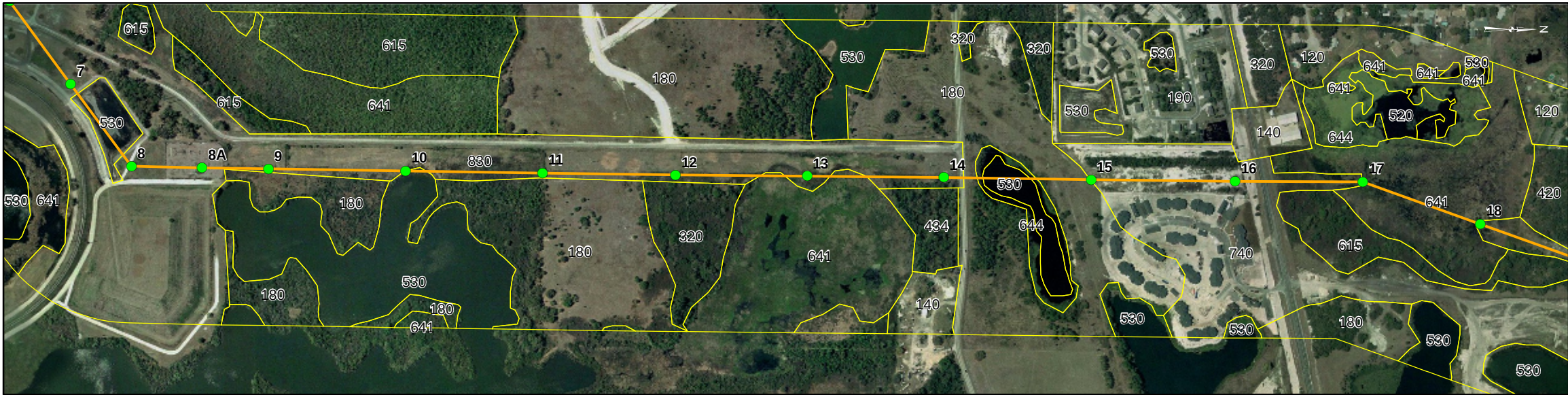


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	GIS	AB 17 Mar. 2008	
	CHECK	SR 17 Mar. 2008	
	REVIEW	KB 17 Mar. 2008	

FIGURE 4-3



Sheet 1



Sheet 2

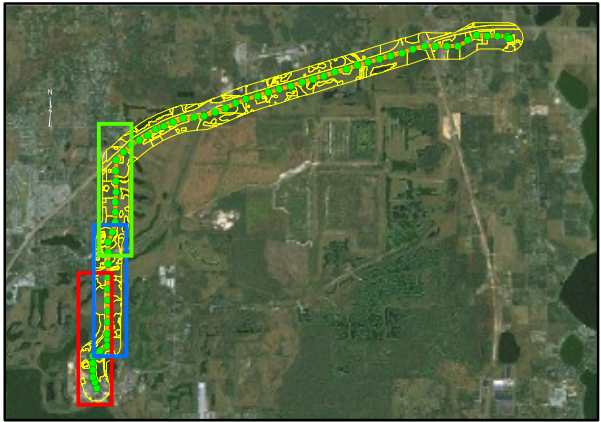


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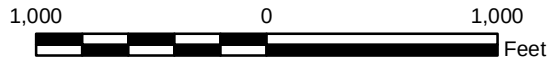
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- Transmission Line
- Land Use and Lnd Cover
- 110 - RESIDENTIAL LOW DENSITY < 2 DWELLING UNITS
- 120 - RESIDENTIAL MED DENSITY 2->5 DWELLING UNIT
- 130 - RESIDENTIAL HIGH DENSITY
- 140 - COMMERCIAL AND SERVICES
- 150 - INDUSTRIAL
- 160 - EXTRACTIVE
- 170 - INSTITUTIONAL
- 180 - RECREATIONAL
- 190 - OPEN LAND
- 210 - CROPLAND AND PASTURELAND
- 214 - ROW CROPS
- 260 - OTHER OPEN LANDS <RURAL>
- 320 - SHRUB AND BRUSHLAND
- 410 - UPLAND CONIFEROUS FOREST
- 411 - PINE FLATWOODS
- 420 - UPLAND HARDWOOD FORESTS - PART 1
- 434 - HARDWOOD CONIFER MIXED
- 440 - TREE PLANTATIONS
- 520 - LAKES
- 530 - RESERVOIRS
- 615 - STREAM AND LAKE SWAMPS (BOTTOMLAND)
- 621 - CYPRESS
- 630 - WETLAND FORESTED MIXED
- 641 - FRESHWATER MARSHES
- 643 - WET PRAIRIES
- 644 - EMERGENT AQUATIC VEGETATION
- 653 - INTERMITTENT PONDS
- 740 - DISTURBED LAND
- 810 - TRANSPORTATION
- 820 - COMMUNICATIONS
- 830 - UTILITIES

AREA MAP



REFERENCE

Southwest Florida Water Management District, 2005

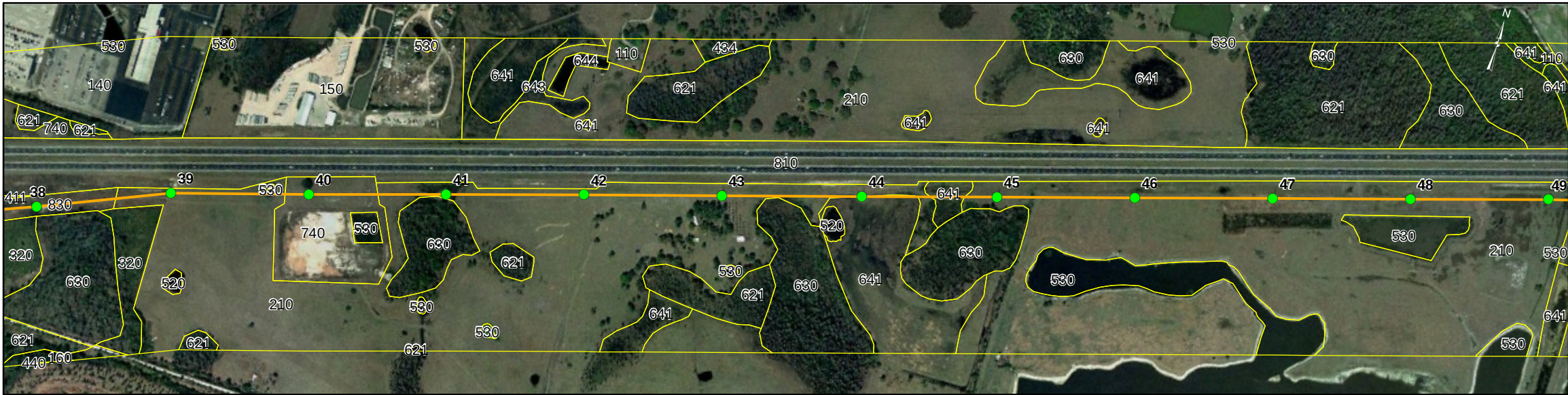


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Land Use and Land Cover			
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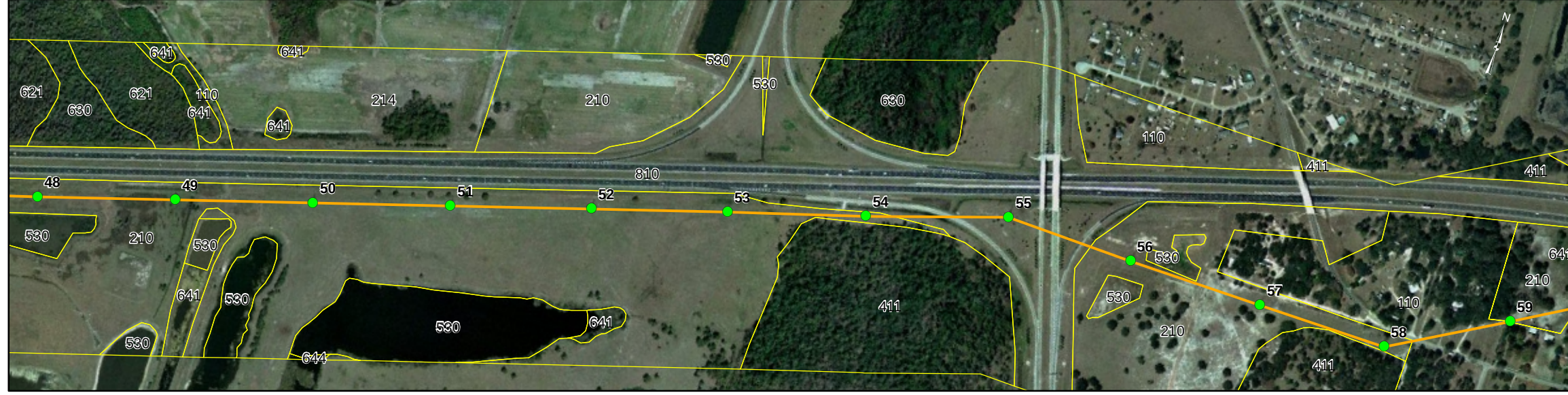
FIGURE 5-1



Sheet 4



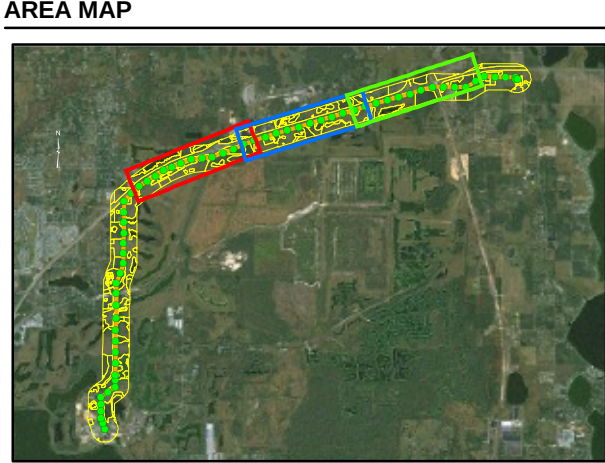
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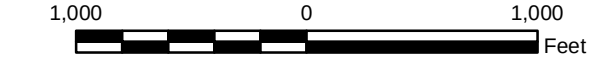
Sheet 6

LEGEND

- Transmission Line Structures
- Transmission Line
- Land Use and Land Cover
 - 110 - RESIDENTIAL LOW DENSITY < 2 DWELLING UNITS
 - 120 - RESIDENTIAL MED DENSITY 2->5 DWELLING UNIT
 - 130 - RESIDENTIAL HIGH DENSITY
 - 140 - COMMERCIAL AND SERVICES
 - 150 - INDUSTRIAL
 - 160 - EXTRACTIVE
 - 170 - INSTITUTIONAL
 - 180 - RECREATIONAL
 - 190 - OPEN LAND
 - 210 - CROPLAND AND PASTURELAND
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 - 653 - INTERMITTENT PONDS
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 - 820 - COMMUNICATIONS
 - 830 - UTILITIES



REFERENCE
Southwest Florida Water Management District, 2005

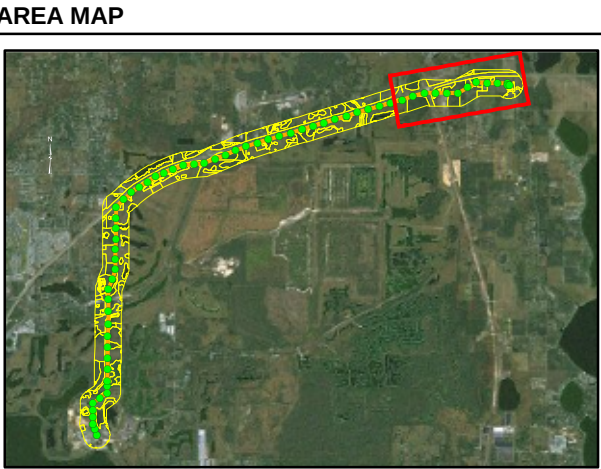


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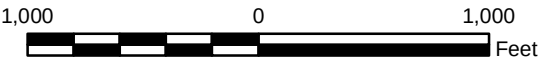


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 - Transmission Line
 - Land Use and Land Cover
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 - 120 - RESIDENTIAL MED DENSITY 2->5 DWELLING UNIT
 - 130 - RESIDENTIAL HIGH DENSITY
 - 140 - COMMERCIAL AND SERVICES
 - 150 - INDUSTRIAL
 - 160 - EXTRACTIVE
 - 170 - INSTITUTIONAL
 - 180 - RECREATIONAL
 - 190 - OPEN LAND
 - 210 - CROPLAND AND PASTURELAND
 - 214 - ROW CROPS
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 - 411 - PINE FLATWOODS
 - 420 - UPLAND HARDWOOD FORESTS - PART 1
 - 434 - HARDWOOD CONIFER MIXED
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 - 520 - LAKES
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 - 615 - STREAM AND LAKE SWAMPS (BOTTOMLAND)
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 - 630 - WETLAND FORESTED MIXED
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 - 644 - EMERGENT AQUATIC VEGETATION
 - 653 - INTERMITTENT PONDS
 - 740 - DISTURBED LAND
 - 810 - TRANSPORTATION
 - 820 - COMMUNICATIONS
 - 830 - UTILITIES



REFERENCE
Southwest Florida Water Management District, 2005



PROJECT			
Orlando Utilities Commission McIntosh Plant to Lake Agnes Substation Transmission Line Right-of-Way Maintenance			
TITLE			
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	REVIEW	KB	17 Mar. 2008
			REV. 0
			FIGURE 5-3

APPENDIX A

WETLAND SURVEY

WETLAND AREAS

WETLAND #	AREA (sf)
4A	3393.5
4B	1159.4
6A	15834.2
8A	15361.1
8B	15440.7
9A-11A (LESS UPLAND)	272692.8
12A	207656.3
13C	1132.6
14A	5278.2
14B	16423.7
16A-18A	395232.2
19A	3902.2
23A (1)	10920.4
23A (2)	4685.9
23A (3)	39382.4
23B	35983.4
26A	13490.1
27A	270074.0
27B	123845.4
29A	192979.7
33A	3612.8
33B	16992.9
34A	1344.7
34B	10626.8
34C	388.6
35A	3358.0
35B	101252.7
35C	83175.3
35D	30754.5
36A	1987.4
36B	812.5
36C	3309.9
37A	22434.6
37B	16512.9
37C	2089.3
37D	1931.0
39A	4546.5
DRY POND (39)	71195.7
40B	97498.3
43A	54803.9
43B	128055.2
44A	14289.0
44B	86646.2
45A	3100.9
POND (46B)	72357.1
POND (46C)	77464.4
47A	1508.8
48A	27407.1
48B	57029.9
48C	1617.4
49A	7647.9
49B	11402.4
54A	13959.1
54B	3736.0
54C	1392.8
60A	11366.6
60B	13024.2
60C	5379.4
TOTAL = (sf)	2710880.8
TOTAL = (ACRES)	62.2

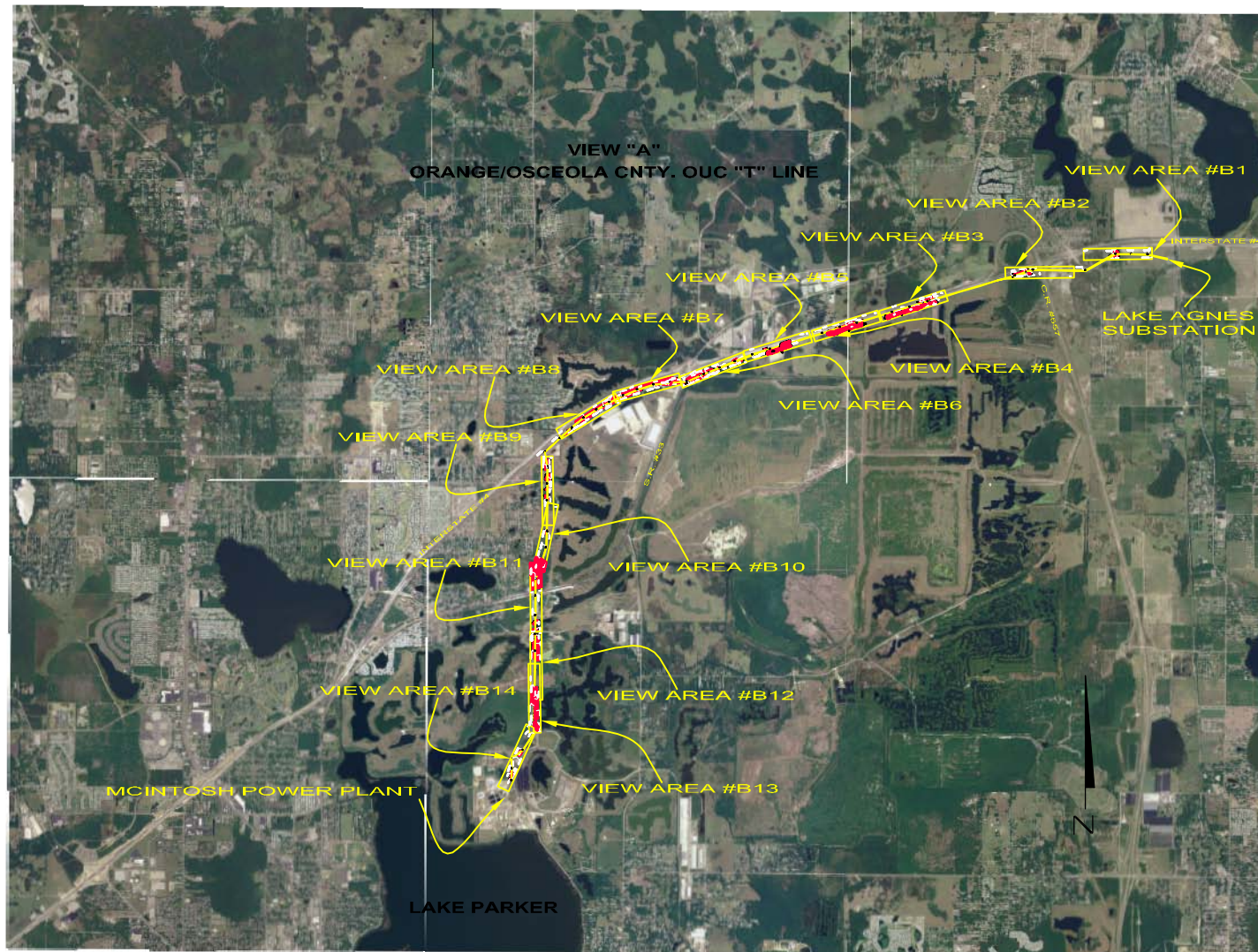
SHEET INDEX:

SHEET	DESCRIPTION
1	COVER SHEET / LOCATION MAP / AREA MAP WITH PHOTO
2-6	LOCATIONS AND DEPICTION OF WETLAND AREAS

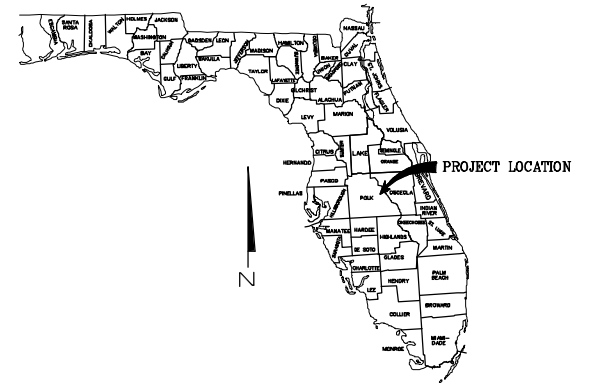
LEGEND

	DELINEATED (FLAGGED) WETLAND LINE
	DELINEATED WETLAND AREAS
	LOCATED FENCE (CYAN)
	EXISTING ACCESS ROAD
	DRAINAGE PIPE
	OVERHEAD TRANSMISSION LINE
OU =	ORLANDO UTILITIES COMMISSION
ROW =	RIGHT-OF-WAY
S.R. =	STATE ROAD
DIA. =	DIAMETER

SPECIFIC PURPOSE SURVEY OF WETLAND LOCATIONS ALONG PORTIONS
OF
ORLANDO UTILITIES COMMISSION "T" LINE
FROM LAKE AGNES SUBSTATION TO THE MCINTOSH POWER PLANT
LOCATED IN
POLK COUNTY, FLORIDA



VICINITY MAP
NOT TO SCALE



SURVEYOR'S NOTES:

- 1) THIS SPECIFIC PURPOSE SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THE SIGNING FLORIDA LICENSED SURVEYOR AND MAPPER.
- 2) THE SPECIFIC PURPOSE OF THIS SURVEY WAS TO LOCATE, AND MAP THE WETLAND AREAS ASSOCIATED WITH THE EXISTING OVERHEAD ELECTRIC TRANSMISSION LINE CORRIDOR. THE WETLAND AREAS WERE DETERMINED BY THE CLIENT.
- 3) LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR OWNERSHIP, RIGHTS-OF-WAY, EASEMENTS OR OTHER MATTERS OF TITLE BY THIS FIRM.
- 4) THIS SURVEY WAS PERFORMED USING DIFFERENTIAL GLOBAL POSITIONING SYSTEM SURVEY METHODOLOGY. THE DATUM IS THE NORTH AMERICAN DATUM OF 1983, 1990 ADJUSTMENT (NAD83/90). ACCURACY IS AT THE SUBMETER LEVEL.
- 5) THIS SURVEY IS CERTIFIED TO THE ORLANDO UTILITIES COMMISSION.
- 6) EXCEPT AS SHOWN HEREON, INTERIOR IMPROVEMENTS WERE NOT LOCATED.
- 7) THIS IS NOT A BOUNDARY SURVEY.
- 8) DATE OF PHOTOGRAPHY: JUNE 2005. THIS IS UNRECTIFIED PHOTOGRAPHY AND IS INTENDED FOR GRAPHICAL INFORMATION ONLY.
- 9) WETLANDS LINES, AREAS, AND LABELING SHOWN HEREON WERE LOCATED FROM MARKING/FLAGGING ESTABLISHED BY GOLDER ASSOCIATES, GAINESVILLE, FL.
- 10) POLE #S WERE TAKEN FROM MARKINGS ON POLE AND PER DRAWINGS FURNISHED BY THE CLIENT.
- 11) THIS SURVEY WAS ORIGINALLY COMPILED AT A SCALE OF 1" = 100' ON 24"x36" SHEETS. REDUCTIONS OF THESE MAPS WILL CHANGE THE PUBLISHED SCALE.
- 12) ON MAY 23, 2011 RETURNED TO FIELD TO LOCATE ADDITIONAL FLAGS OF WETLAND AREAS AND PONDS LOCATED BETWEEN TRANSMISSION POLE # 39 AND TRANSMISSION POLE # 55.

ROBERT M. JONES
FLORIDA PROFESSIONAL SURVEYOR AND MAPPER
LICENSE No. LS 4201

PREPARED BY:
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MACTEC Engineering & Consulting, Inc.
14150 North John Young Parkway Orlando, Florida 32804-2620
Phone: 407.522.7570 Fax: 407.522.7576
CERTIFICATE OF AUTHORIZATION: LB 6969

LAST DAY IN FIELD: 05/23/2011

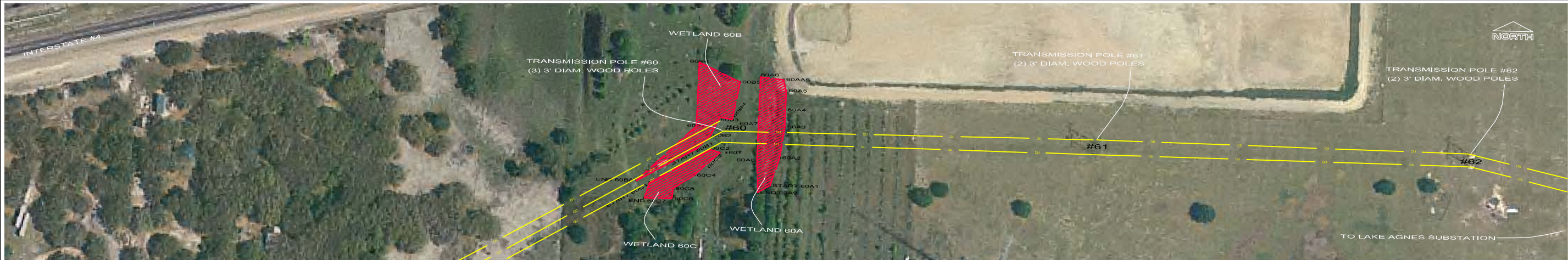
ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE
ORLANDO, FLORIDA 32801

REVISION	DATE
location of addition wetland flags	05/31/11
addition wetland areas	07/21/11

DWG. DATE: 03/24/08	PHOTO DATE: 06/20/05	DRAWN BY: C.V.R.H./P.E.W.	CHECKED BY: R.M.J.
FIELD BOOKS: 909/076 & 1007	OFF. NO.: 827000202/6541003	DWG. NAME: OUC LAKE AGNES.dwg	

PROJECT TITLE:
SPECIFIC PURPOSE SURVEY OF LIMITS OF WETLAND LOCATIONS ALONG PORTIONS
OF
ORLANDO UTILITIES COMMISSION LAKELAND "T" LINE
LAKE AGNES SUBSTATION TO THE MCINTOSH POWER PLANT

SHEET NO.
1 OF 6



VIEW AREA #B1
SEE SHEET 1 FOR LOCATION

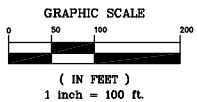


VIEW AREA #B2
SEE SHEET 1 FOR LOCATION



VIEW AREA #B3
SEE SHEET 1 FOR LOCATION

LEGEND			
	DELINEATED (FLAGGED) WETLAND LINE		DRAINAGE PIPE
	DELINEATED WETLAND AREAS	OUC =	ORLANDO UTILITIES COMMISSION
	EXISTING ACCESS ROAD	ROW =	RIGHT-OF-WAY
	OVERHEAD TRANSMISSION LINE	S.R. =	STATE ROAD
	LOCATED FENCE	DIAM. =	DIAMETER



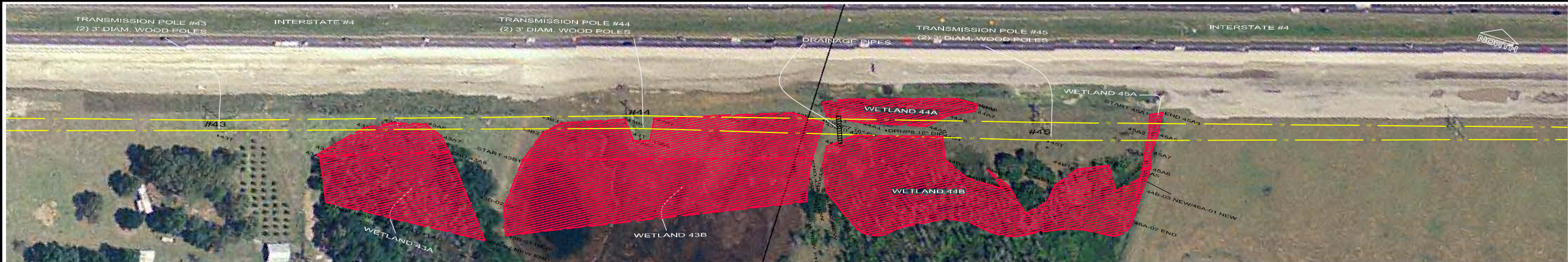
PREPARED BY:
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Phone: 407.522.7570 Fax: 407.522.7576
CERTIFICATE OF AUTHORIZATION: LB 6969

DATE	REVISION
05/31/11	Location of addition wetland flags
C.V.R.H.	DRAWN BY:
R.M.J.	CHECKED BY:

PROJECT TITLE:
SPECIFIC PURPOSE SURVEY OF LIMITS OF WETLAND LOCATIONS ALONG PORTIONS
OF
ORLANDO UTILITIES COMMISSION "T" LINE
LAKE AGNES SUBSTATION TO THE MCINTOSH POWER PLANT

SHEET NO
2 OF 6

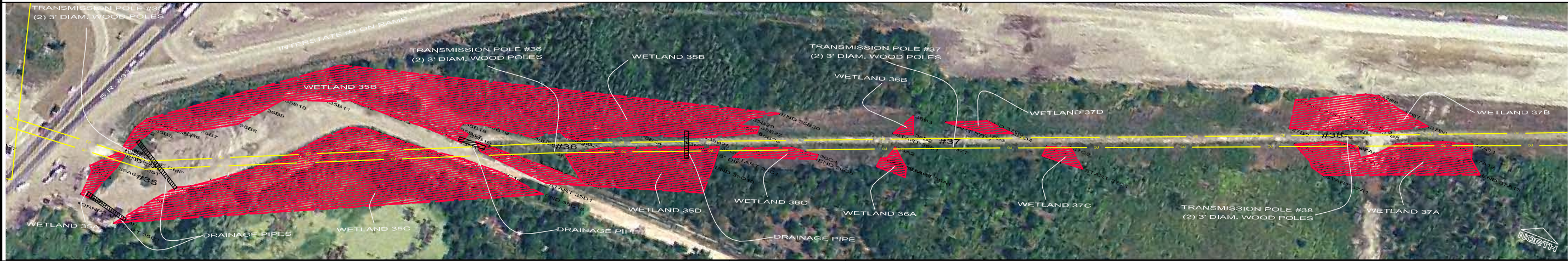
ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE
ORLANDO, FLORIDA 32801



VIEW AREA #B4
SEE SHEET 1 FOR LOCATION



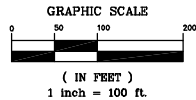
VIEW AREA #B5
SEE SHEET 1 FOR LOCATION



VIEW AREA #B6
SEE SHEET 1 FOR LOCATION

LEGEND

- | | | | |
|--|-----------------------------------|---------|------------------------------|
| | DELINEATED (FLAGGED) WETLAND LINE | | DRAINAGE PIPE |
| | DELINEATED WETLAND AREAS | OUC = | ORLANDO UTILITIES COMMISSION |
| | EXISTING ACCESS ROAD | ROW = | RIGHT-OF-WAY |
| | OVERHEAD TRANSMISSION LINE | S.R. = | STATE ROAD |
| | LOCATED FENCE | DIAM. = | DIAMETER |



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PROJECT TITLE:
SPECIFIC PURPOSE SURVEY OF LIMITS OF WETLAND LOCATIONS ALONG PORTIONS
OF
ORLANDO UTILITIES COMMISSION "T" LINE
LAKE AGNES SUBSTATION TO THE MCINTOSH POWER PLANT

CNTY.:	POLK	DWG. DATE:	03/24/08	REVISION	DATE
FIELD BOOKS:	909/976	PHOTO DATE:	06/2005	Location of addition wetland flags	05/31/11
DRAWN BY:	C.V.R.H.	CHECKED BY:	R.M.J.		
DWG. NAME:	00CTAFT.dwg				

ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE
ORLANDO, FLORIDA 32801

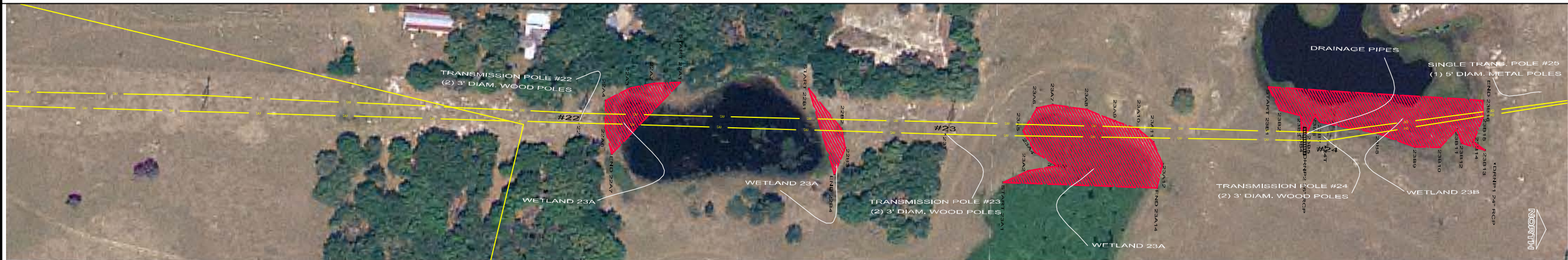
SHEET NO
3 OF 6



VIEW AREA #B7
SEE SHEET 1 FOR LOCATION



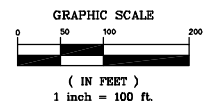
VIEW AREA #B8
SEE SHEET 1 FOR LOCATION



VIEW AREA #B9
SEE SHEET 1 FOR LOCATION

LEGEND

	DELINEATED (FLAGGED) WETLAND LINE		DRAINAGE PIPE
	DELINEATED WETLAND AREAS	OUC =	ORLANDO UTILITIES COMMISSION
	EXISTING ACCESS ROAD	ROW =	RIGHT-OF-WAY
	OVERHEAD TRANSMISSION LINE	S.R. =	STATE ROAD
	LOCATED FENCE	DIAM. =	DIAMETER



PREPARED BY:

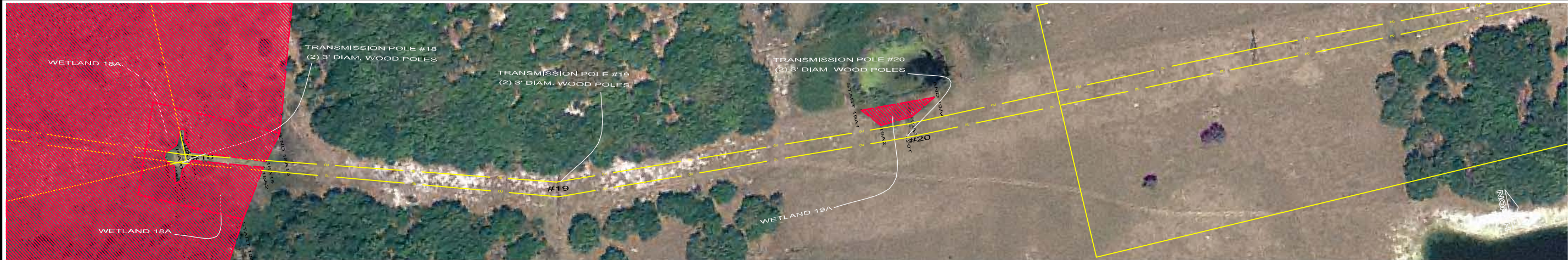
MACTEC

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CERTIFICATE OF AUTHORIZATION: LB 6969

ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE
ORLANDO, FLORIDA 32801

DATE	REVISION
05/31/11	Location of addition wetland flags
06/20/05	
09/09/96	
03/24/08	
DWG. NAME: OUC\TAP1.dwg	CHECKED BY: R.M.J.
OFF. NO.: 6374000260	DRAWN BY: C.V.R.H.
CNTY.: POLK	DWG. DATE: 03/24/08

PROJECT TITLE:
SPECIFIC PURPOSE SURVEY OF LIMITS OF WETLAND LOCATIONS ALONG PORTIONS
OF
ORLANDO UTILITIES COMMISSION "T" LINE
LAKE AGNES SUBSTATION TO THE MCINTOSH POWER PLANT



VIEW AREA #B10
SEE SHEET 1 FOR LOCATION



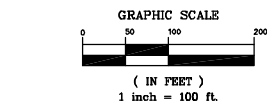
VIEW AREA #B11
SEE SHEET 1 FOR LOCATION



VIEW AREA #B12
SEE SHEET 1 FOR LOCATION

LEGEND

	DELINEATED (FLAGGED) WETLAND LINE		DRAINAGE PIPE
	DELINEATED WETLAND AREAS	OUC =	ORLANDO UTILITIES COMMISSION
	EXISTING ACCESS ROAD	ROW =	RIGHT-OF-WAY
	OVERHEAD TRANSMISSION LINE	S.R. =	STATE ROAD
	LOCATED FENCE	DIAM. =	DIAMETER



SEE SHEET 1 FOR GENERAL NOTES

PREPARED BY:

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CERTIFICATE OF AUTHORIZATION: LB 6969

ORLANDO UTILITIES COMMISSION
500 SOUTH ORANGE AVENUE
ORLANDO, FLORIDA 32801

CNTY.:	POLK	DWG. DATE:	03/24/08	REVISION	DATE
FIELD BOOKS:	909/976	PHOTO DATE:	06/2005	Location of addition wetland flag	05/31/11
OFF. NO.:	6374008980	DRAWN BY:	C.V.R.H.		
DWG. NAME:	OUTMPT.dwg	CHECKED BY:	R.M.J.		

PROJECT TITLE:
SPECIFIC PURPOSE SURVEY OF LIMITS OF WETLAND LOCATIONS ALONG PORTIONS
OF
ORLANDO UTILITIES COMMISSION "T" LINE
LAKE AGNES SUBSTATION TO THE MCINTOSH POWER PLANT

SHEET NO
5 OF 6

APPENDIX B

SITE PHOTOGRAPHS



Photograph 1. Unnamed Creek – FLUCFCS 510.



Photograph 2. Unnamed Creek – FLUCFCS 510.



Photograph 3. Ditch – FLUCFCS 511.



Photograph 4. Ditch – FLUCFCS 511.



Photograph 5. Reservoir – FLUCFCS 530.



Photograph 6. Reservoir – FLUCFCS 530.



Photograph 7. Cypress – FLUCFCS 621.



Photograph 8. Cypress – FLUCFCS 621 (in background).



Photograph 9. Wetland Scrub – FLUCFCS 631.



Photograph 10. Wetland Scrub – FLUCFCS 631.



Photograph 11. Freshwater Marsh – FLUCFCS 641.



Photograph 12. Freshwater Marsh – FLUCFCS 641.



Photograph 13. Wet Prairie – FLUCFCS 643.



Photograph 14. Wet Prairie – FLUCFCS 643.

APPENDIX C

ACOE DATA SHEETS AND JD FORMS

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 4A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Urochloa mutica</i>	H	FACW	8		
2 <i>Phyla nodiflora</i>	H	FAC	9		
3 <i>Salix spp.</i>	S	OBL	10		
4 <i>Cynodon dactylon</i>	H	FACU	11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 75

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>12</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Immokalee sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 3/1			Fine sand
6-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 8/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is this Sampling Point Within a Wetland?	☒ Yes	☐ No
Wetland Hydrology Present?	☒ Yes	☐ No			
Hydric Soils Present?	☒ Yes	☐ No			
Remarks: <u>The wetland is a ditch on McIntosh property.</u>					

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 4B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? <i>(if needed, explain on reverse)</i> ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Geranium spp.</u>	H		8		
2 <u>Urochloa mutica</u>	H	FACW	9		
3			10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>12</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Placid and Myakka Fine Sands, Depressional</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 2/1			Sand
6-20	E	10YR 8/2			Sand
20-24	Bh1	N 2/0			Sand
24-32	Bh2	5YR 2/2	10YR 2/2	Common/ coarse	Sand
32-36	Bh3	5 YR 2/2			Sand
36-56	C/B	7.5YR 4/4	5 YR 2/2	Common/ medium	Sand
56-85	C	10YR 4/2			Sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: <u>Hydric Soils</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>The wetland is a ditch on McIntosh property.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 6A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Eupatorium capillifolium</i>	H	FAC	8 <i>Scirpus cyperinus</i>	H	OBL
2 <i>Schinus terebinthifolius</i>	S	FAC	9 <i>Baccharis spp.</i>	S	FAC
3 <i>Salix spp.</i>	S	OBL	10 <i>Andropogon spp.</i>	H	FACW
4 <i>Ludwigia peruviana</i>	H	OBL	11 <i>Sporobolus indicus</i>	H	FACU+
5 <i>Osmunda regalis</i> L. var. <i>spectabilis</i>	H	OBL	12 _____		
6 <i>Thelypteris</i> spp	S	FACW	13 _____		
7 <i>Carex spp.</i>	H	FACW	14 _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 91

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Immokalee sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 3/1			Fine sand
6-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 8/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>The wetland is a wetland scrub on McIntosh property.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 8A</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Hydrocotyle spp.</i>	H	OBL	8		
2 <i>Schinus terebinthifolius</i>	S	FAC	9		
3 <i>Salix spp.</i>	S	OBL	10		
4 <i>Ludwigia peruviana</i>	H	OBL	11		
5 <i>Typha sp.</i>	H	OBL	12		
6 <i>Myrica spp.</i>	S	FAC	13		
7 <i>Carex spp.</i>	H	FACW	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>48</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Water</u> Taxonomy (Subgroup): _____	Drainage Class: _____ Field Observations Confirm Mapped Type? <u>Yes</u> <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
Hydric Soil Indicators: ☐ Histosol ☐ Reducing Conditions ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Histic Epipedon ☐ Gleyed or Low-Chroma Colors ☐ Listed on National Hydric Soils List ☐ Sulfidic Odor ☐ Concretions ☐ Listed on Local Hydric Soils List ☐ Aquic Moisture Regime ☐ Organic Streaking in Sandy Soils ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>The wetland is a 5-10 acre reservoir on McIntosh property.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>Lake Agnes to McIntosh Powerplant T-line</u>	Date: <u>February 2007</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>Arrants</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>FLUCFCS 641</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: <u>Wetland 8B</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Ludwigia peruviana</i>	S	OBL	8		
2 <i>Cyperus surinamensis</i>	H	FACW	9		
3 <i>Baccharis halmifolia</i>	S	FAC	10		
4 <i>Acer rubrum</i>	S	FAC	11		
5 <i>Rubus spp.</i>	H		12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 80

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☒ Aerial Photographs ☐ Other ☐ No recorded data available Field Observations: Depth of Surface Water: _____ (In.) Depth to Free Water in Pit: _____ (In.) Depth to Saturated Soil: <u>0-12</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☒ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: Old mining site.	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0-5% slopes</u>	Drainage Class: mod rapid to slow <i>Circle</i>																
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No																
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.												
0-6	A				Dk. Brwn concretions												
Hydric Soil Indicators: <table style="width: 100%;"> <tr> <td>☐ Histosol</td> <td>☒ Reducing Conditions</td> <td>☐ High Organic Content in Surface Layer in Sandy Soils</td> </tr> <tr> <td>☐ Histic Epipedon</td> <td>☒ Gleyed or Low-Chroma Colors</td> <td>☐ Listed on National Hydric Soils List</td> </tr> <tr> <td>☐ Sulfidic Odor</td> <td>☒ Concretions</td> <td>☐ Listed on Local Hydric Soils List</td> </tr> <tr> <td>☐ Aquic Moisture Regime</td> <td>☐ Organic Streaking in Sandy Soils</td> <td>☐ Other (explain in remarks)</td> </tr> </table>						☐ Histosol	☒ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☒ Concretions	☐ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Histosol	☒ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils															
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List															
☐ Sulfidic Odor	☒ Concretions	☐ Listed on Local Hydric Soils List															
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)															
Remarks: _____																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: _____	

Form Content Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>Lake Agnes to McIntosh Powerplant T-line</u>	Date: <u>February 2007</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>Arrants</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>FLUCFCS 641 / 534</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: <u>Wetland 9A/11A</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Ludwigia peruviana</i>	S	OBL	8 <i>Typha spp.</i>	H	OBL
2 <i>Cyperus surinamensis</i>	H	FACW	9 <i>Andropogon glomeratus</i>	H	OBL
3 <i>Baccharis halmifolia</i>	S	FAC	10 _____		
4 <i>Acer rubrum</i>	S	FAC	11 _____		
5 <i>Juncus effusus</i>	H	FACW	12 _____		
6 <i>Panicum hemitomon</i>	H	FACW	13 _____		
7 <i>Carex albolutescens</i>	H	FACW	14 _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☒ Aerial Photographs ☐ Other ☐ No recorded data available Field Observations: Depth of Surface Water: <u>0-48</u> (In.) Depth to Free Water in Pit: _____ (In.) Depth to Saturated Soil: <u>0-12</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☒ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☒ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: <u>Old mining site.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0-5% slopes / water</u>	Drainage Class: <u>mod rapid to slow</u> Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A				Dk. Brwn concretions

Hydric Soil Indicators:		
☐ Histosol	☒ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List
☐ Sulfidic Odor	☒ Concretions	☐ Listed on Local Hydric Soils List
☒ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 12A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Ludwigia peruviana</i>	H	OBL	8 <i>Andropogon spp.</i>	H	FACW
2 <i>Eupatorium capillifolium</i>	H	FAC	9 <i>Woodwardia virginica</i>	H	FACW
3 <i>Salix spp.</i>	S	OBL	10 <i>Itea virginica</i>	S	OBL
4 <i>Baccharis spp.</i>	S	OBL	11		
5 <i>Ricinus communis</i>	S	FACU	12		
6 <i>Sambucus canadensis</i>	H	FAC	13		
7 <i>Rubus argutus</i>	S	FAC	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 90

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Smyrna and Myakka Fine Sands</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 2/1			Sand
6-20	E	10YR 8/2			Sand
20-24	Bh1	N 2/0			Sand
24-32	Bh2	5YR 2/2	10YR 2/2	Common/ coarse	Sand
32-36	Bh3	5 YR 2/2			Sand
36-56	C/B	7.5YR 4/4	5 YR 2/2	Common/ medium	Sand
56-85	C	10YR 4/2			Sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: <u>Soils very organic.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>The wetland is a small freshwater marsh.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 13C</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Ludwigia peruviana</u>	H	OBL	8		
2 <u>Eupatorium capillifolium</u>	H	FAC	9		
3			10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Smyrna and Myakka Fine Sands</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 2/1			Sand
6-20	E	10YR 8/2			Sand
20-24	Bh1	N 2/0			Sand
24-32	Bh2	5YR 2/2	10YR 2/2	Common/ coarse	Sand
32-36	Bh3	5 YR 2/2			Sand
36-56	C/B	7.5YR 4/4	5 YR 2/2	Common/ medium	Sand
56-85	C	10YR 4/2			Sand

Hydric Soil Indicators:		
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>The wetland is a small freshwater marsh.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 14A/14B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Acer spp.</i>	T	FACW	8 <i>Eleocharis sp.</i>	H	OBL
2 <i>Hydrocotyle spp.</i>	H	OBL	9 <i>Myrica spp.</i>	S	FAC
3 <i>Woodwardia virginica</i>	H	FACW	10 <i>Typha sp.</i>	H	OBL
4 <i>Cephalanthus occidentalis</i>	S	OBL	11 <i>Baccharis spp.</i>	S	FAC
5 <i>Ludwigia arculata</i>	H	OBL	12 <i>Salix spp.</i>	S	OBL
6 <i>Polygonum spp.</i>	H	OBL	13 <i>Thelypteris spp.</i>	S	FACW
7 <i>Eupatorium capillifolium</i>	H	FAC	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>48</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-7	A	10YR 3/1			Fine sand
7-13	E1	10YR 6/2			Fine sand
13-16	B	10YR 3/3			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>The wetland is a small pond/ reservoir.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 16A/18A</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Eleocharis sp.</i>	H	OBL
2 <i>Spartina spp.</i>	H	FACW	9 <i>Persea palustris</i>	T	OBL
3 <i>Woodwardia virginica</i>	H	FACW	10 <i>Juncus repens</i>	H	OBL
4 <i>Ludwigia peruviana</i>	H	OBL	11 <i>Pteridium spp.</i>	H	FACU
5 <i>Andropogon spp.</i>	H	FACW	12 <i>Vitis rotundifolia</i>	H	FAC
6 <i>Salix spp.</i>	S	OBL	13 <i>Rubus argutus</i>	S	FAC
7 <i>Lyonia mariana</i>	S	FACW	14 <i>Carex albolutescens</i>	H	FAC+

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 93

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Hontoon Muck</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	Oe	5YR 3/2	10YR 7/3		Mucky Peat
5-14	Oa1	10YR 6/2	10YR 5/3		Sapric
14-60	Oa2	5YR 2/2	10YR 3/2		Sapric
60-65	Oa3	N 2/	10YR 4/2		Sapric
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is this Sampling Point Within a Wetland?	☒ Yes	☐ No
Wetland Hydrology Present?	☒ Yes	☐ No			
Hydric Soils Present?	☒ Yes	☐ No			
Remarks: <u>Dry freshwater marsh and pond with mucky soils.</u>					

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 19A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Eupatorium capillifolium</i>	H	FAC	8		
2 <i>Carex spp.</i>	H	FACW	9		
3 <i>Sambucus canadensis</i>	H	FAC	10		
4 <i>Rubus argutus</i>	S	FAC	11		
5 <i>Phytolacca americana</i>	S	FACW	12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Smyrna and Myakka Fine Sands</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 2/1			Sand
6-20	E	10YR 8/2			Sand
20-24	Bh1	N 2/0			Sand
24-32	Bh2	5YR 2/2	10YR 2/2	Common/ coarse	Sand
32-36	Bh3	5 YR 2/2			Sand
36-56	C/B	7.5YR 4/4	5 YR 2/2	Common/ medium	Sand
56-85	C	10YR 4/2			Sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Very dry, small freshwater marsh.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 22A/B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Eupatorium capillifolium</i>	H	FAC	8		
2 <i>Panicum hemitomon</i>	H	OBL	9		
3 <i>Amphicarpum muhlenbergianum</i>	H	FACW	10		
4 <i>Ludwigia peruviana</i>	H	OBL	11		
5 <i>Spartina spp.</i>	H	FACW	12		
6 <i>Cephalanthus occidentalis</i>	S	OBL	13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Samsula Muck</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-9	Oa1	5YR 2/1	10YR 3/2	Moderate	Muck
9-36	Oa2	5YR 2/2	10YR 3/2	Common	Sapric material
36-46	Cg1	10YR 4/2	10YR 3/1	Common/ coarse	Sand
46-55	Cg2	10YR 6/1	10YR 5/3	Common/ medium	Sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Hydric Soils Present? ☒ Yes ☐ No
Is this Sampling Point Within a Wetland? ☒ Yes ☐ No		
Remarks: <u>Small freshwater marsh located south of the ROW between poles 22 and 23.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 23A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Eupatorium capillifolium</i>	H	FAC	8 <i>Ludwigia peruviana</i>	H	OBL
2 <i>Baccharis spp</i>	S	OBL	9 <i>Carex spp.</i>	H	FACW
3 <i>Panicum hemitomon</i>	H	OBL	10 <i>Cyperus spp.</i>	H	OBL
4 <i>Alternanthera philoxeroides</i>	H	OBL	11		
5 <i>Hydrocotyle sp.</i>	H	OBL	12		
6 <i>Polygonum spp.</i>	H	OBL	13		
7 <i>Andropogon spp.</i>	H	FACW	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>48</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Water</u>	Drainage Class: _____																
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>																
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.												
Hydric Soil Indicators: <table style="width: 100%;"> <tr> <td>☐ Histosol</td> <td>☐ Reducing Conditions</td> <td>☐ High Organic Content in Surface Layer in Sandy Soils</td> </tr> <tr> <td>☐ Histic Epipedon</td> <td>☐ Gleyed or Low-Chroma Colors</td> <td>☐ Listed on National Hydric Soils List</td> </tr> <tr> <td>☐ Sulfidic Odor</td> <td>☐ Concretions</td> <td>☐ Listed on Local Hydric Soils List</td> </tr> <tr> <td>☐ Aquic Moisture Regime</td> <td>☐ Organic Streaking in Sandy Soils</td> <td>☐ Other (explain in remarks)</td> </tr> </table>						☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☐ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils															
☐ Histic Epipedon	☐ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List															
☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List															
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)															
Remarks: _____																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>A retention pond (between 5 and 10 acres) located on the the east side of the ROW.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 23B</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Eupatorium capillifolium</i>	H	FAC	8 <i>Ludwigia peruviana</i>	H	OBL
2 <i>Baccharis spp</i>	S	OBL	9 <i>Andropogon spp.</i>	H	FACW
3 <i>Sagittaria lancifolia</i>	H	OBL	10 <i>Fuirena spp.</i>	H	OBL
4 <i>Alternanthera philoxeroides</i>	H	OBL	11 <i>Polypremum procumbens</i>	H	FAC
5 <i>Setaria spp.</i>	H	FAC	12 <i>Ludwigia arcuata</i>	H	OBL
6 <i>Hydrocotyle sp.</i>	H	OBL	13 <i>Carex albolutescens</i>	H	FAC+
7 <i>Ludwigia leptocarpa</i>	H	OBL	14 <i>Panicum repens</i>	H	FACW

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>48</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Neilhurst Sand, 1 to 5 Percent Slopes</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> <u>Circle</u> No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-3	A	10YR 6/1			Fine sand
3-80	C	5YR 4/3			Fine sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>A retention pond (less than 5 acres) located on the the west side of the ROW.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 26A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Ludwigia arcuata</i>	H	OBL	8		
2 <i>Taxodium spp.</i>	T	OBL	9		
3 <i>Panicum hemitomon</i>	H	OBL	10		
4 <i>Salix spp.</i>	S	OBL	11		
5 <i>Phyla nodiflora</i>	H	FAC	12		
6 <i>Eichhornia crassipes</i>	H	OBL	13		
7 <i>Lemna spp.</i>	H	OBL	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: Many invasive species present.

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>48</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____																
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle No																
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.												
0-7	A	10YR 3/1			Fine sand												
7-13	E1	10YR 6/2			Fine sand												
13-16	B	10YR 3/3			Fine sand												
Hydric Soil Indicators: <table style="width: 100%;"> <tr> <td>☐ Histosol</td> <td>☐ Reducing Conditions</td> <td>☐ High Organic Content in Surface Layer in Sandy Soils</td> </tr> <tr> <td>☐ Histic Epipedon</td> <td>☒ Gleyed or Low-Chroma Colors</td> <td>☐ Listed on National Hydric Soils List</td> </tr> <tr> <td>☐ Sulfidic Odor</td> <td>☐ Concretions</td> <td>☐ Listed on Local Hydric Soils List</td> </tr> <tr> <td>☐ Aquic Moisture Regime</td> <td>☐ Organic Streaking in Sandy Soils</td> <td>☐ Other (explain in remarks)</td> </tr> </table>						☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils															
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List															
☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List															
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)															
Remarks: _____																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>A retention pond (less than 5 acres) located on the golf course.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u> Applicant/Owner: <u>OUC</u> Investigator: <u>M. Arrants, S. Rizzo</u>	Date: <u>01/11/08</u> County: <u>Polk</u> State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Community ID: <u>Wetland 27A</u> Transect ID: _____ Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Ludwigia peruviana</i>	H	OBL	8		
2 <i>Schinus terebinthifolius</i>	S	FAC	9		
3 <i>Baccharis spp</i>	S	OBL	10		
4 <i>Salix spp.</i>	S	OBL	11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: Many invasive species present.

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>12</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u> Taxonomy (Subgroup): _____	Drainage Class: _____ Field Observations Confirm Mapped Type? <u>Yes</u> Circle No																																				
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Depth (inches)</th> <th style="width: 10%;">Horizon</th> <th style="width: 20%;">Matrix Color (Munsell Moist)</th> <th style="width: 20%;">Mottle Colors (Munsell Moist)</th> <th style="width: 20%;">Mottle Abundance/Size/Contrast</th> <th style="width: 20%;">Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr><td>0-7</td><td>A</td><td>10YR 3/1</td><td></td><td></td><td>Fine sand</td></tr> <tr><td>7-13</td><td>E1</td><td>10YR 6/2</td><td></td><td></td><td>Fine sand</td></tr> <tr><td>13-16</td><td>B</td><td>10YR 3/3</td><td></td><td></td><td>Fine sand</td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.	0-7	A	10YR 3/1			Fine sand	7-13	E1	10YR 6/2			Fine sand	13-16	B	10YR 3/3			Fine sand												
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.																																
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7-13	E1	10YR 6/2			Fine sand																																
13-16	B	10YR 3/3			Fine sand																																
Hydric Soil Indicators: <table style="width: 100%;"> <tr> <td>☐ Histosol</td> <td>☐ Reducing Conditions</td> <td>☐ High Organic Content in Surface Layer in Sandy Soils</td> </tr> <tr> <td>☐ Histic Epipedon</td> <td>☒ Gleyed or Low-Chroma Colors</td> <td>☐ Listed on National Hydric Soils List</td> </tr> <tr> <td>☐ Sulfidic Odor</td> <td>☐ Concretions</td> <td>☐ Listed on Local Hydric Soils List</td> </tr> <tr> <td>☐ Aquic Moisture Regime</td> <td>☐ Organic Streaking in Sandy Soils</td> <td>☐ Other (explain in remarks)</td> </tr> </table>		☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)																								
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☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)																																			
Remarks: _____																																					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No Wetland Hydrology Present? ☒ Yes ☐ No Hydric Soils Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Remarks: <u>A ditch system running along I-4 north of the ROW.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 27B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Eleocharis sp.</i>	H	OBL
2 <i>Sambucus canadensis</i>	H	FAC	9 <i>Baccharis spp</i>	S	OBL
3 <i>Myrica spp</i>	S	FAC	10 <i>Salix spp.</i>	S	OBL
4 <i>Solidago spp</i>	H	FACW	11 <i>Scoparia dulcis</i>	H	FAC
5 <i>Ludwigia peruviana</i>	H	OBL	12 <i>Setaria sp.</i>	H	FAC
6 <i>Rubus argutus</i>	S	FAC	13 <i>Rhynchospora sp.</i>	H	FACW
7 <i>Schinus terebinthifolius</i>	S	FAC	14 <i>Acer rubrum</i>	T	FACW

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: Many invasive species present.

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-7	A	10YR 3/1			Fine sand
7-13	E1	10YR 6/2			Fine sand
13-16	B	10YR 3/3			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>A freshwater marsh that starts east of structure 27 south of the ROW and runs east along ROW.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/11/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 29A</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Eleocharis sp.</i>	H	OBL
2 <i>Sambucus canadensis</i>	H	FAC	9 <i>Baccharis spp</i>	S	OBL
3 <i>Sporobolus indicus</i>	H	FACU+	10 <i>Salix spp.</i>	S	OBL
4 <i>Solidago canadensis</i>	H	FACU+	11 <i>Scoparia dulcis</i>	H	FAC
5 <i>Ludwigia peruviana</i>	H	OBL	12 <i>Carex spp.</i>	H	FACW
6 <i>Rubus argutus</i>	S	FAC	13 <i>Hydrocotyle sp.</i>	H	FACW
7 <i>Eupatorium capillifolium</i>	H	FAC	14 <i>Acer rubrum</i>	T	FACW

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 86

Remarks: Many invasive species present.

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-7	A	10YR 3/1			Fine sand
7-13	E1	10YR 6/2			Fine sand
13-16	B	10YR 3/3			Fine sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No		
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Dry freshwater marsh that starts along retention pond located between poles 29 and 30; the wetland runs east along the southern side of ROW.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 33A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Eleocharis sp.</i>	H	OBL
2 <i>Polygonum spp.</i>	H	OBL	9 <i>Brachiaria mutica</i>	H	FACW
3 <i>Alternanthera philoxeroides</i>	H	OBL	10		
4 <i>Galium tinctorium</i>	H	FACW	11		
5 <i>Ludwigia peruviana</i>	H	OBL	12		
6 <i>Rubus argutus</i>	S	FAC	13		
7 <i>Eupatorium capillifolium</i>	H	FAC	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)	
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Neilhurst Sand, 1 to 5 Percent Slopes</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> ☐ No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-3	A	10YR 6/1			Fine sand
3-80	C	5YR 4/3			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Small, dry, wet prairie along southern side of ROW.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 33B</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Salix spp.</i>	S	OBL
2 <i>Polygonum spp.</i>	H	OBL	9		
3 <i>Alternanthera philoxeroides</i>	H	OBL	10		
4 <i>Galium tinctorium</i>	H	FACW	11		
5 <i>Ludwigia arculata</i>	H	OBL	12		
6 <i>Hydrocotyle sp.</i>	H	OBL	13		
7 <i>Eupatorium capillifolium</i>	H	FAC	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Neilhurst Sand, 1 to 5 Percent Slopes</u>	Drainage Class: _____																
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> <u>No</u>																
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.												
0-3	A	10YR 6/1			Fine sand												
3-80	C	5YR 4/3			Fine sand												
Hydric Soil Indicators: <table style="width: 100%;"><tr><td>☐ Histosol</td><td>☐ Reducing Conditions</td><td>☐ High Organic Content in Surface Layer in Sandy Soils</td></tr><tr><td>☐ Histic Epipedon</td><td>☒ Gleyed or Low-Chroma Colors</td><td>☐ Listed on National Hydric Soils List</td></tr><tr><td>☐ Sulfidic Odor</td><td>☐ Concretions</td><td>☒ Listed on Local Hydric Soils List</td></tr><tr><td>☐ Aquic Moisture Regime</td><td>☐ Organic Streaking in Sandy Soils</td><td>☐ Other (explain in remarks)</td></tr></table>						☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils															
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List															
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List															
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)															
Remarks: <u>Soils are disturbed by feral hogs.</u>																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: _____		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 34A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Ludwigia peruviana</i>	H	OBL	8 <i>Polygonum spp.</i>	H	OBL
2 <i>Juncus effusus</i>	H	OBL	9 <i>Galium tinctorium</i>	H	FACW
3 <i>Salix spp.</i>	S	OBL	10 <i>Andropogon glomeratus</i>	H	FACW
4 <i>Cyperus sp.</i>	H	FACW	11 <i>Eleocharis spp.</i>	H	OBL
5 <i>Carex spp.</i>	H	FACW	12 <i>Baccharis spp.</i>	S	OBL
6 <i>Hydrocotyle sp.</i>	H	FACW	13 _____		
7 <i>Alternanthera philoxeroides</i>	H	OBL	14 _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)	
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Wet prairie that is west of pole 35 and west of SR 33.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 34B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? <i>(if needed, explain on reverse)</i> ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Ludwigia peruviana</i>	H	OBL	8 <i>Polygonum spp.</i>	H	OBL
2 <i>Juncus effusus</i>	H	OBL	9 <i>Galium tinctorium</i>	H	FACW
3 <i>Salix spp.</i>	S	OBL	10 <i>Andropogon glomeratus</i>	H	FACW
4 <i>Cyperus sp.</i>	H	FACW	11 <i>Eleocharis spp.</i>	H	OBL
5 <i>Carex spp.</i>	H	FACW	12 _____		
6 <i>Hydrocotyle sp.</i>	H	FACW	13 _____		
7 <i>Alternanthera philoxeroides</i>	H	OBL	14 _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Freshwater marsh west of pole 35 and west of SR 33. Highly disturbed. Appears isolated.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 34C</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Polygonum spp.</u>	H	OBL	9		
3 <u>Solidago spp.</u>	H	FACW	10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators:					
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime		☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils		☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)	
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Small isolated wet prairie under ROW.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 35A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Ludwigia peruviana</i>	H	OBL	8		
2 <i>Schinus terebinthifolius</i>	S	FAC	9		
3 <i>Salix spp.</i>	S	OBL	10		
4 <i>Thelypteris spp</i>	S	FACW	11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Ditch wetland west of pole 35 and east of SR 33. Highly disturbed. Appears isolated.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 35B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Myrica spp.</i>	S	FAC
2 <i>Ludwigia peruviana</i>	S	OBL	9 <i>Viola lanceolata</i>	H	OBL
3 <i>Scoparia dulcis</i>	H	FAC	10 <i>Eleocharis sp.</i>	H	OBL
4 <i>Salix caroliniana</i>	S	OBL	11 <i>Cyperus spp.</i>	H	FACW
5 <i>Baccharis sp.</i>	S	FAC	12 <i>Taxodium spp.</i>	T	OBL
6 <i>Ilex cassine</i>	T	OBL	13 <i>Schinus terebinthifolius</i>	S	FAC
7 <i>Acer rubrum</i>	T	FACW	14 <i>Xyris spp.</i>	H	OBL

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: <u>Soils are disturbed by feral hogs.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Wetland begins as a ditch by state road 33 and runs along north side of ROW where it turns into a freshwater marsh.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 35C</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Sambucus canadensis</i>	H	FAC
2 <i>Ludwigia peruviana</i>	S	OBL	9 <i>Woodwardia virginica</i>	H	FACW
3 <i>Scoparia dulcis</i>	H	FAC	10 <i>Imperata cylindrica</i>	H	---
4 <i>Salix caroliniana</i>	S	OBL	11 <i>Eupatorium capillifolium</i>	H	FAC
5 <i>Baccharis spp.</i>	S	FAC	12 <i>Typha sp.</i>	H	OBL
6 <i>Quercus nigra</i>	T	FACW	13 _____		
7 <i>Acer rubrum</i>	T	FACW	14 _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Wetland begins by State road 33 and runs along ROW.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 35D</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Sambucus canadensis</i>	H	FAC
2 <i>Ludwigia peruviana</i>	S	OBL	9 <i>Woodwardia virginica</i>	H	FACW
3 <i>Scoparia dulcis</i>	H	FAC	10 <i>Imperata cylindrica</i>	H	---
4 <i>Salix caroliniana</i>	S	OBL	11 <i>Eupatorium capillifolium</i>	H	FAC
5 <i>Baccharis spp.</i>	S	FAC	12 <i>Typha sp.</i>	H	OBL
6 <i>Quercus nigra</i>	T	FACW	13 _____		
7 <i>Acer rubrum</i>	T	FACW	14 _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No		
Hydric Soils Present?	☒ Yes ☐ No		
Remarks: <u>Wetland begins as ditch along private road and ties into ROW as a freshwater marsh.</u>			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 36A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8		
2 <i>Acer rubrum</i>	T	FACW	9		
3 <i>Juncus marginatus</i>	H	FACW	10		
4 <i>Eleocharis sp.</i>	H	OBL	11		
5 <i>Solidago canadensis</i>	H	FACU+	12		
6 <i>Carex albolutescens</i>	H	FAC+	13		
7 <i>Viola lanceolata</i>	H	OBL	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 86

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: <u>Soils marginal to poor</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Depressional wetland in swale.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 36B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Ludwigia peruviana</u>	S	OBL	9		
3 <u>Carex albolutescens</u>	H	FAC+	10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Depression along edge of pad in ROW swale.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 36C</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Viola lanceolata</i>	H	OBL	8 <i>Andropogon glomeratus</i>	H	FAC
2 <i>Setaria sp.</i>	H	FAC	9 <i>Juncus effusus</i>	H	OBL
3 <i>Sporobolus indicus</i>	H	FACU+	10		
4 <i>Centella asiatica</i>	H	FACW	11		
5 <i>Carex albolutescens</i>	H	FAC+	12		
6 <i>Scoparia dulcis</i>	H	FAC	13		
7 <i>Rubus argutus</i>	H	FAC	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 89

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: <u>Soils disturbed.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Depression along access road.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 37A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Taxodium ascendans</u>	T	OBL	8		
2 <u>Myrica cerifera</u>	H	FAC	9		
3 <u>Ludwigia peruviana</u>	H	OBL	10		
4 <u>Juncus effusus</u>	H	OBL	11		
5 <u>Eupatorium capillifolium</u>	H	FAC	12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Lynne sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 4/1			Fine sand
6-13	E1	10YR 6/2			Fine sand
13-18	E2	10YR 7/2			Fine sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Cypress swamp and freshwater marsh wetland on south side of bermed road in ROW.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 37B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Cyperus sp.</u>	H	FACW	8		
2 <u>Typha sp.</u>	H	OBL	9		
3			10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: <u>No apparent hydrologic connection to Wetland 37A, and no culvert connection from I-4.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Lynne sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 4/1			Fine sand
6-13	E1	10YR 6/2			Fine sand
13-18	E2	10YR 7/2			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Freshwater marsh wetland on north side of bermed road in ROW. Highly disturbed with tire ruts and fill spots. The boundaries of this wetland are questionable due to disturbance.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 37C</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Woodwardia virginica</i>	H	FACW	8		
2 <i>Carex albolutescens</i>	H	FAC+	9		
3 <i>Amphicarpum muhlenbergianum</i>	H	FACW	10		
4 <i>Acer rubrum</i>	T	FACW	11		
5 <i>Andropogon glomeratus</i>	H	FACW	12		
6 <i>Rubus argutus</i>	H	FAC	13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No		
Hydric Soils Present?	☒ Yes ☐ No		
Remarks: <u>Wet prairie that transitions into red maple depressional wetland upon exiting ROW.</u>			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>01/10/08</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 37D</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Woodwardia virginica</i>	H	FACW	8		
2 <i>Juncus effusus</i>	H	OBL	9		
3 <i>Acer rubrum</i>	T	FACW	10		
4 <i>Juncus marginatus</i>	H	FACW	11		
5 <i>Solidago canadensis</i>	H	FACU+	12		
6 <i>Andropogon glomeratus</i>	H	FACW	13		
7 <i>Eleocharis sp.</i>	H	OBL	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 86

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Marginal swale caused by construction of pad.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 39A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Acer rubrum</i>	T	FACW	8		
2 <i>Taxodium ascendans</i>	T	OBL	9		
3 <i>Juncus effusus</i>	H	OBL	10		
4 <i>Eleocharis sp.</i>	H	OBL	11		
5 <i>Hydrocotyle sp.</i>	H	FACW	12		
6 <i>Eupatorium capillifolium</i>	H	FAC	13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Eaton mucky fine sand, depressional</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 4/1			Loamy sand
6-18	E	10YR 6/1			Loamy sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Wetland consists of waterway at east side and floodplain cypress and hardwood swamp adjacent to the west of the waterway; freshwater marsh fringe on the south side of the bermed ROW road.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 40A/B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i>	H	OBL	8 <i>Acer rubrum</i>	T	FACW
2 <i>Hydrocotyle sp.</i>	H	OBL	9 <i>Taxodium ascendans</i>	T	OBL
3 <i>Commelina sp.</i>	H	FACW	10 <i>Juncus effusus</i>	H	OBL
4			11 <i>Eleocharis sp.</i>	H	OBL
5			12 <i>Hydrocotyle sp.</i>	H	FACW
6			13 <i>Eupatorium capillifolium</i>	H	FAC
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	Remarks: <u>Connects to waterway at east side of the wetland. Connects hydrologically to Wetland 40B by concrete pipe from underneath I-4.</u>

SOILS

Map Unit Name (Series and Phase): <u>Eaton mucky fine sand, depressional</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 4/1			Loamy sand
6-18	E	10YR 6/1			Loamy sand

Hydric Soil Indicators:		
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Un-named creek and associated freshwater marsh/forested floodplain</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 43A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Eupatorium capillifolium</i>	H	FAC	8		
2 <i>Juncus effusus</i>	H	OBL	9		
3 <i>Rhynchospora sp.</i>	H	FACW	10		
4 <i>Symphotrichum carolinianum</i>	H	OBL	11		
5 <i>Solanum viarum</i>	H	UPL	12		
6 <i>Polygonum hydropiperoides</i>	H	OBL	13		
7 <i>Taxodium ascendans</i>	T	OBL	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 86

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>2</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Eaton mucky fine sand, depressional</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 4/1			Loamy sand
6-18	E	10YR 6/1			Loamy sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Cypress wetland fringed by freshwater marsh.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 43B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Panicum repens</i>	H	FACW	8		
2 <i>Pontederia cordata</i>	H	OBL	9		
3 <i>Ludwigia peruviana</i>	S	OBL	10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>4</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)

Remarks: Standing water at south portion, south of pole 44.

SOILS

Map Unit Name (Series and Phase): <u>Eaton mucky fine sand, depressional</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 4/1			Loamy sand
6-18	E	10YR 6/1			Loamy sand

Hydric Soil Indicators:	Reducing Conditions	High Organic Content in Surface Layer in Sandy Soils
☐ Histosol	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List
☐ Histic Epipedon	☐ Concretions	☒ Listed on Local Hydric Soils List
☐ Sulfidic Odor	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Aquic Moisture Regime		

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Freshwater marsh wetland with cypress fringe.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/10/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 44A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Pontederia cordata</u>	H	OBL	9		
3 <u>Panicum repens</u>	H	FACW	10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>12</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: <u>Hydrologically connected by concrete pipe to Wetland 44B on south side of bermed road.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Ditch with freshwater marsh fringe on north side of bermed road in transmission line ROW.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/11/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 44B</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Rubus argutus</i>	S	FAC	8		
2 <i>Panicum repens</i>	H	FACW	9		
3 <i>Juncus effusus</i>	H	OBL	10		
4 <i>Taxodium distichum</i>	T	OBL	11		
5 <i>Ludwigia peruviana</i>	S	OBL	12		
6 <i>Baccharis halimifolia</i>	S	FAC	13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>10</u> (In.) Depth to Saturated Soil: <u>6</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: <u>Connected to Wetland 44A by concrete pipe. Does not connect to 45A within ROW, but may connect beyond ROW.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Eaton mucky fine sand, depressional</u>	Drainage Class: _____																
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> <u>No</u>																
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.												
0-6	A	10YR 4/1			Loamy sand												
6-18	E	10YR 6/1			Loamy sand												
Hydric Soil Indicators: <table style="width: 100%;"><tr><td>☐ Histosol</td><td>☐ Reducing Conditions</td><td>☐ High Organic Content in Surface Layer in Sandy Soils</td></tr><tr><td>☐ Histic Epipedon</td><td>☒ Gleyed or Low-Chroma Colors</td><td>☐ Listed on National Hydric Soils List</td></tr><tr><td>☐ Sulfidic Odor</td><td>☐ Concretions</td><td>☒ Listed on Local Hydric Soils List</td></tr><tr><td>☐ Aquic Moisture Regime</td><td>☐ Organic Streaking in Sandy Soils</td><td>☐ Other (explain in remarks)</td></tr></table>						☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils															
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List															
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List															
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)															
Remarks: _____																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Freshwater marsh wetland with cypress fringe.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/10/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 45A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Schinus terebinthifolius</u>	<u>S</u>	<u>FAC</u>	8 _____		
2 _____			9 _____		
3 _____			10 _____		
4 _____			11 _____		
5 _____			12 _____		
6 _____			13 _____		
7 _____			14 _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>None</u> (In.) Depth to Saturated Soil: <u>10</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-7	A	10YR 3/1			Fine sand
7-13	E1	10YR 6/2			Fine sand
13-16	B	10YR 3/3			Fine sand

Hydric Soil Indicators:		
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List
☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Culverted ditch that connects to cypress wetland to south.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/10/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 47A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Panicum repens</u>	H	FACW	9		
3			10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>None</u> (In.) Depth to Saturated Soil: <u>10</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-7	A	10YR 3/1			Fine sand
7-13	E1	10YR 6/2			Fine sand
13-16	B	10YR 3/3			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Depressional wetland that appears to be a seep from the adjacent retention pond to the south.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/10/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 48A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Polygonum hydropiperoides</u>	H	FAC	9		
3 <u>Scoparia dulcis</u>	H	FAC	10		
4 <u>Setaria spp.</u>	H	FAC	11		
5 <u>Phyla nodiflora</u>	H	FAC	12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>10</u> (In.) Depth to Saturated Soil: <u>6</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Lynne sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 4/1			Fine sand
6-13	E1	10YR 6/2			Fine sand
13-18	E2	10YR 7/2			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Hydric Soils Present? ☒ Yes ☐ No
Is this Sampling Point Within a Wetland? ☒ Yes ☐ No		
Remarks: <u>Ditch adjacent to transmission line ROW and I-4.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/10/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 48B</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Polygonum hydropiperoides</u>	H	FAC	9		
3			10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>10</u> (In.) Depth to Saturated Soil: <u>6</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: <u>Hydrologically connected to Wetland 48A by a concrete pipe.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____																
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>																
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.												
0-7	A	10YR 3/1			Fine sand												
7-13	E1	10YR 6/2			Fine sand												
13-16	B	10YR 3/3			Fine sand												
Hydric Soil Indicators: <table style="width: 100%;"><tr><td>☐ Histosol</td><td>☐ Reducing Conditions</td><td>☐ High Organic Content in Surface Layer in Sandy Soils</td></tr><tr><td>☐ Histic Epipedon</td><td>☒ Gleyed or Low-Chroma Colors</td><td>☐ Listed on National Hydric Soils List</td></tr><tr><td>☐ Sulfidic Odor</td><td>☐ Concretions</td><td>☐ Listed on Local Hydric Soils List</td></tr><tr><td>☐ Aquic Moisture Regime</td><td>☐ Organic Streaking in Sandy Soils</td><td>☐ Other (explain in remarks)</td></tr></table>						☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils															
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List															
☐ Sulfidic Odor	☐ Concretions	☐ Listed on Local Hydric Soils List															
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)															
Remarks: _____																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Freshwater marsh; continues to the south; may have some upland inclusions.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/10/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 48C</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Sesbania sp.</u>	S	FAC	9		
3 <u>Paspalum notatum</u>	H	UPL	10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 66

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>10</u> (In.) Depth to Saturated Soil: <u>6</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)

Remarks: _____

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-7	A	10YR 3/1			Fine sand
7-13	E1	10YR 6/2			Fine sand
13-16	B	10YR 3/3			Fine sand

Hydric Soil Indicators:	Reducing Conditions	High Organic Content in Surface Layer in Sandy Soils
☐ Histosol	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List
☐ Histic Epipedon	☐ Concretions	☐ Listed on Local Hydric Soils List
☐ Sulfidic Odor	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Aquic Moisture Regime		

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	

Remarks: Isolated depressions adjacent to Wetland 48B.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/10/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 49A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? <i>(if needed, explain on reverse)</i> ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Sesbania sp.</u>	S	FAC	9		
3			10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>10</u> (In.) Depth to Saturated Soil: <u>6</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)

Remarks: Hydrologically connected to Wetland 48A by concrete pipe.

SOILS

Map Unit Name (Series and Phase): <u>Arents, 0 to 5 percent slopes</u>	Drainage Class: _____
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> <i>Circle</i> No

Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-7	A	10YR 3/1			Fine sand
7-13	E1	10YR 6/2			Fine sand
13-16	B	10YR 3/3			Fine sand

Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime	☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils	☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)
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Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Hydric Soils Present? ☒ Yes ☐ No
Is this Sampling Point Within a Wetland? ☒ Yes ☐ No		
Remarks: <u>Channelized ditch with a freshwater marsh fringe.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/7/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 54A</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Panicum repens</i>	H	OBL	8		
2 <i>Phyla nodiflora</i>	H	FAC	9		
3 <i>Xyris sp.</i>	H	OBL	10		
4 <i>Cyperus spp.</i>	H	OBL	11		
5 <i>Bidens sp.</i>	H	OBL	12		
6 <i>Hydrocotyle spp.</i>	H	OBL	13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available Field Observations: Depth of Surface Water: <u>4</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: <u>Connected to Wetland 54C through culvert.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/1			Fine sand
5-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 7/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Ditch along south side of SR 470 on-ramp.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/7/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 54B</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Juncus effusus</u>	H	OBL	8		
2 <u>Panicum repens</u>	H	FACW	9		
3 <u>Ludwigia peruviana</u>	S	OBL	10		
4 <u>Typha sp.</u>	H	OBL	11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>10</u> (In.) Depth to Saturated Soil: <u>6</u> (In.)	Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Pomona fine sand</u>	Drainage Class: _____																
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle No																
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.												
0-5	A	10YR 3/1			Fine sand												
5-12	E1	10YR 6/1			Fine sand												
12-18	E2	10YR 7/1			Fine sand												
Hydric Soil Indicators: <table style="width: 100%;"><tr><td>☐ Histosol</td><td>☐ Reducing Conditions</td><td>☐ High Organic Content in Surface Layer in Sandy Soils</td></tr><tr><td>☐ Histic Epipedon</td><td>☒ Gleyed or Low-Chroma Colors</td><td>☐ Listed on National Hydric Soils List</td></tr><tr><td>☐ Sulfidic Odor</td><td>☐ Concretions</td><td>☒ Listed on Local Hydric Soils List</td></tr><tr><td>☐ Aquic Moisture Regime</td><td>☐ Organic Streaking in Sandy Soils</td><td>☐ Other (explain in remarks)</td></tr></table>						☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils															
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List															
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List															
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)															
Remarks: _____																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Roadside swale/detention area on west side of bermed access road between I-4 and SR 470 on-ramp.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/7/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 54C</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Polygonum hydropiperoides</i>	H	OBL	8		
2 <i>Symphytotrichum subulatum</i>	H	OBL	9		
3 <i>Setaria parviflora</i>	H	FAC	10		
4 <i>Phyla nodiflora</i>	H	FAC	11		
5 <i>Cyperus flavesces</i>	H	FACW	12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)	
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>6</u> (In.) Depth to Saturated Soil: <u>4</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Immokalee sand</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 3/1			Fine sand
6-12	E1	10YR 6/1			Fine sand
12-18	E2	10YR 8/1			Fine sand
Hydric Soil Indicators:					
☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime		☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils		☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)	
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Wetland Hydrology Present? ☒ Yes ☐ No	Hydric Soils Present? ☒ Yes ☐ No
Is this Sampling Point Within a Wetland? ☒ Yes ☐ No		
Remarks: <u>Ditch with culverts along the on-ramp to SR 470. Culvert runs underneath on-ramp to 470 and wetland continues to northeast.</u>		

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/5/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 60A</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Ludwigia peruviana</u>	H	OBL	8		
2 <u>Eupatorium capillifolium</u>	H	FAC	9		
3 <u>Urena lobata</u>	H	UPL	10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 75

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>12</u> (In.) Depth to Free Water in Pit: <u>At surface</u> (In.) Depth to Saturated Soil: <u>At surface</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Basinger mucky fine sand, depressional</u> Taxonomy (Subgroup): _____	Drainage Class: _____ Field Observations Confirm Mapped Type? <u>Yes</u> Circle No																
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.												
0-2	A	10YR 2/2			Fine sand												
2-18	E	10YR 5/1			Fine sand												
Hydric Soil Indicators: <table style="width: 100%;"><tr><td>☐ Histosol</td><td>☐ Reducing Conditions</td><td>☐ High Organic Content in Surface Layer in Sandy Soils</td></tr><tr><td>☐ Histic Epipedon</td><td>☒ Gleyed or Low-Chroma Colors</td><td>☐ Listed on National Hydric Soils List</td></tr><tr><td>☐ Sulfidic Odor</td><td>☐ Concretions</td><td>☒ Listed on Local Hydric Soils List</td></tr><tr><td>☐ Aquic Moisture Regime</td><td>☐ Organic Streaking in Sandy Soils</td><td>☐ Other (explain in remarks)</td></tr></table>						☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils	☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List	☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List	☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils															
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List															
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List															
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)															
Remarks: _____																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No		
Hydric Soils Present? ☒ Yes ☐ No		
Remarks: <u>Deeply incised ditch wetland with standing water; disturbed.</u>		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/7/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland 60B</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Phyla nodiflora</i>	H	FAC	8		
2 <i>Gelsemium sp.</i>	H	FAC	9		
3 <i>Croton sp.</i>	H	FACW	10		
4 <i>Setaria geniculata</i>	H	FAC	11		
5 <i>Eupatorium capillifolium</i>	H	FAC	12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 inches ☒ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)	
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>None</u> (In.) Depth to Saturated Soil: <u>10</u> (In.)	
Remarks: <u>Hydrology marginal due to drought, but according to OUC, water ponds in the area for several months at a time. Water marks on guywire.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Basinger mucky fine sand, depressional</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> Circle <u>No</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-2	A	10YR 2/2			Fine sand
2-18	E	10YR 5/1			Fine sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☒ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Marginal wetland adjacent to berm road in ROW; herbaceous.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>063-7654.0130 McIntosh Plant – Lake Agnes Substation</u>	Date: <u>12/7/07</u>
Applicant/Owner: <u>OUC</u>	County: <u>Polk</u>
Investigator: <u>M. Arrants, S. Rizzo</u>	State: <u>FL</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	
Community ID: <u>Wetland 60C</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Phyla nodiflora</i>	H	FAC	8		
2 <i>Gelsemium sp.</i>	H	FAC	9		
3 <i>Croton sp.</i>	H	FACW	10		
4 <i>Setaria geniculata</i>	H	FAC	11		
5 <i>Eupatorium capillifolium</i>	H	FAC	12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☐ Aerial Photographs ☐ Other ☒ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☐ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>None</u> (In.) Depth to Saturated Soil: <u>10</u> (In.)	
Remarks: <u>Hydrology marginal due to drought conditions.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Basinger mucky fine sand, depressional</u>	Drainage Class: _____				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <u>Yes</u> <u>Circle</u> No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-2	A	10YR 2/2			Fine sand
2-18	E	10YR 5/1			Fine sand
Hydric Soil Indicators:					
☐ Histosol	☐ Reducing Conditions	☐ High Organic Content in Surface Layer in Sandy Soils			
☐ Histic Epipedon	☒ Gleyed or Low-Chroma Colors	☐ Listed on National Hydric Soils List			
☐ Sulfidic Odor	☐ Concretions	☒ Listed on Local Hydric Soils List			
☐ Aquic Moisture Regime	☐ Organic Streaking in Sandy Soils	☐ Other (explain in remarks)			
Remarks: _____					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No	
Hydric Soils Present? ☒ Yes ☐ No	
Remarks: <u>Marginal wetland on south side of berm road in ROW, southwest of pole 60. Red maple fringe.</u>	

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION: McIntosh to Lake Agnes Substation, Structures 1 - 14

State: FL County/parish/borough: Polk City: Combee Settlement

Center coordinates of site (lat/long in degree decimal format): Lat. 28.081459° **N**, Long. -81.523900° **W**.

Universal Transverse Mercator:

Name of nearest waterbody: Lake Parker

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Parker

Name of watershed or Hydrologic Unit Code (HUC): Saddle Creek

☐ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 4/30/08

☒ Field Determination. Date(s): 5/2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☐ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☒ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: 11.38 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: 1.35 acres of isolated wetlands.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**

Identify TNW: _____.

Summarize rationale supporting determination: _____.

2. **Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”: _____.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

(i) **General Area Conditions:**

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: _____ inches

Average annual snowfall: _____ inches

(ii) **Physical Characteristics:**

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: _____.

Identify flow route to TNW⁵: _____.

Tributary stream order, if known: _____.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: .

Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☐ Bed and banks	
☐ OHWM ⁶ (check all indicators that apply):	
☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	
☐ Discontinuous OHWM. ⁷ Explain: .	

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by:	☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

- Wetland size: acres
- Wetland type. Explain: .
- Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
 - ☐ Discrete wetland hydrologic connection. Explain: .
 - ☐ Ecological connection. Explain: .
 - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetlands 8A, 9A/11A, and 12A are located within the Saddle Creek watershed, and connect through culverts to wetlands adjacent to Lake Parker. These wetlands provide the capacity to reduce pollutant/nutrient loads to the Lake, as well as provide habitat and life cycle support functions for fish and wildlife that are present in the Lake..

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

☐ TNWs: linear feet width (ft), Or, acres.

☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
☐ Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **11.38** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.⁹**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰**

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰**Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.**

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: **Wetlands 4A, 4B, 6A, 8B, 13C, and 14A/14B are isolated systems that do not connect directly or through culverts to any RPW or TNW.**
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☒ Wetlands: 1.35 acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☒ Corps navigable waters' study: completed for Lake Marion as part of Kissimmee River project.
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☐ U.S. Geological Survey map(s). Cite scale & quad name: .
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Google Earth aerial photography, date unknown.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): 1:150,000 USGS topographic map, Florida Atlas & Gazetteer, 2003.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION: McIntosh to Lake Agnes Substation, Structures 15 - 55

State: FL

County/parish/borough: Polk

City: Gibsonia

Center coordinates of site (lat/long in degree decimal format): Lat. 28.137648° **N**, Long. -81.903072° **W**.

Universal Transverse Mercator:

Name of nearest waterbody: Lake Deeson

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Saddle Creek

Name of watershed or Hydrologic Unit Code (HUC): Orange Hammock Drain

☐ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 4/29/08

☒ Field Determination. Date(s): 5/2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☐ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☒ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: 19.86 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: 28.97 acres of isolated wetlands occur within the review area.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**

Identify TNW: _____.

Summarize rationale supporting determination: _____.

2. **Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”: _____.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

(i) **General Area Conditions:**

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: _____ inches

Average annual snowfall: _____ inches

(ii) **Physical Characteristics:**

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: _____.

Identify flow route to TNW⁵: _____.

Tributary stream order, if known: _____.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: .

Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☐ Bed and banks	
☐ OHWM ⁶ (check all indicators that apply):	
☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	
☐ Discontinuous OHWM. ⁷ Explain: .	

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by:	☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

- Wetland size: acres
- Wetland type. Explain: .
- Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
 - ☐ Discrete wetland hydrologic connection. Explain: .
 - ☐ Ecological connection. Explain: .
 - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetlands 27A, 35A, 35B, 35C, 37A, 40A/B, 43A, 43B, 44A, 44B, and 45A are located within the Orange Hammock Drainage watershed, and connect to wetlands that drain to Saddle Creek. These wetlands provide the capacity to reduce downstream pollutant/nutrient loads, as well as provide habitat and life cycle support functions for fish and wildlife and nutrient transport for downstream systems.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
☐ TNWs: linear feet width (ft), Or, acres.
☐ Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**
☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
☐ Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
☐ Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **19.86** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.⁹**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰**

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰**Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.**

☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: **Wetlands 16A/18A, 19A, 22A/B, 23A, 23B, 26A, 27B, 29A, 33A, 33B, 34A, 34B, 34C, 35D, 36A, 36B, 36C, 37B, 37D, 39A, 39, 46B, 46C, 47A, 48A, 48B, 48C, 49A, 49B, 54A, 54B, and 54C do not connect directly or indirectly to any RPW or TNW, and do not provide a significant nexus with any TNW.**

☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

☐ Lakes/ponds: acres.

☐ Other non-wetland waters: acres. List type of aquatic resource: .

☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).

☐ Lakes/ponds: acres.

☐ Other non-wetland waters: acres. List type of aquatic resource: .

☒ Wetlands: 28.97acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☒ Corps navigable waters' study: completed for Lake Marion as part of Kissimmee River project.

☒ U.S. Geological Survey Hydrologic Atlas: .

☐ USGS NHD data.

☒ USGS 8 and 12 digit HUC maps.

☐ U.S. Geological Survey map(s). Cite scale & quad name: .

☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .

☐ National wetlands inventory map(s). Cite name: .

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date): Google Earth, 2011.

or ☐ Other (Name & Date): .

☐ Previous determination(s). File no. and date of response letter: .

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☒ Other information (please specify): 1:150,000 USGS topographic map, Florida Atlas & Gazetteer, 2003.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION: McIntosh to Lake Agnes Substation, Structures 56 - 62

State: FL

County/parish/borough: Polk

City: Polk City

Center coordinates of site (lat/long in degree decimal format): Lat. 28.155580° **N**, Long. -81.826242° **W**.

Universal Transverse Mercator:

Name of nearest waterbody: Lake Agnes

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Mattie

Name of watershed or Hydrologic Unit Code (HUC): Lake Agnes Outlet

☐ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 4/29/08

☒ Field Determination. Date(s): 5/2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☐ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☒ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: 0.68 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: **0.68 acres of isolated wetlands occur in the vicinity of Structure 60, no connection to RPW or TNW.**

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**

Identify TNW: .

Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”: .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

(i) **General Area Conditions:**

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

(ii) **Physical Characteristics:**

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW⁵: .

Tributary stream order, if known: .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: .

Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☐ Bed and banks	
☐ OHWM ⁶ (check all indicators that apply):	
☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	
☐ Discontinuous OHWM. ⁷ Explain: .	

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by:	☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

- Wetland size: acres
- Wetland type. Explain: .
- Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
 - ☐ Discrete wetland hydrologic connection. Explain: .
 - ☐ Ecological connection. Explain: .
 - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☐ TNWs: linear feet width (ft), Or, acres.
- ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
- ☐ Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
☐ Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **1.20** acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰**Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - ☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: **Wetlands 60A, 60B, and 60C are located within the Lake Agnes Outlet watershed, and are isolated. Therefore, a significant nexus does not exist between wetlands within the review area and any TNW.**
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: 0.68 acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☒ Corps navigable waters' study: completed for Lake Marion as part of Kissimmee River project.
- ☒ U.S. Geological Survey Hydrologic Atlas: .
 - ☐ USGS NHD data.
 - ☒ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name: .
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Google Earth aerial photography, date unknown.
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☒ Other information (please specify): 1:150,000 USGS topographic map, Florida Atlas & Gazetteer, 2003.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

APPENDIX D

UMAM SPREADSHEETS

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes		Application Number	Assessment Area Name or Number Wetland 40A/B - Unnamed Creek and Floodplain (FLUCFCS 510/630/641)
FLUCCs code 510 - Streams and Waterways. 630 - Mixed Wetland Forest, 641-Freshwater Marsh	Further classification (optional)	Impact or Mitigation Site? Impact	Assessment Area Size 2.24
Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Contains mixed forested floodplain; connects to cypress wetlands to the south and east. Surrounded by pastureland, disturbed land, transmission line ROW, and I-4.			
Assessment area description Wetland 40A/B is an unnamed creek and associated floodplain consisting of freshwater marsh and mixed wetland forest, vegetated with a mix of species including red maple (<i>Acer rubrum</i>), pond cypress (<i>Taxodium ascendens</i>), soft rush (<i>Juncus effusus</i>), spikerush (<i>Eleocharis</i> spp.), marsh pennywort (<i>Hydrocotyle</i> spp.) and dogfennel (<i>Eupatorium capillifolium</i>).			
Significant nearby features transmission line ROW, I-4, extractive areas		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique	
Functions Wildlife habitat, natural water treatment, drainage		Mitigation for previous permit/other historic use N/A	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Herpetofauna, wading birds, deer, feral hogs		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (SSC), wood stork (E), and little blue heron (SSC).	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No wildlife was observed during the site visit.			
Additional relevant factors:			
Assessment conducted by: S. Rizzo, M. Arrants		Assessment date(s): December-07	

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes	Application Number	Assessment Area Name or Number Wetland 40A/B - Unnamed Creek and Floodplain (FLUCFCS 510/630/641)
Impact or Mitigation Impact - Fill	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
--	---	---	--	---

.500(6)(a) Location and Landscape Support w/o pres or current 7 with 0	Location and landscape support variable decreased due to proximity of roadways and transmission lines, and location within pastureland. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 8 with 0	The water environment variable is slightly reduced due to presence of roadways and altered hydrology. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 9 with 0	Creek and associated forested and herbaceous floodplain is dominated by appropriate plant species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.80	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = (0.80 x 0.33) = 0.26

Delta = [with-current]
-0.80

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART IIB – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes	Application Number	Assessment Area Name or Number Wetland 40A/B - Unnamed Creek and Floodplain (FLUCFCS 510/630/641)
Impact or Mitigation Impact - Clearing	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support Loss of canopy species associated with clearing the transmission line ROW would reduce the location and landscape support variable for wetland forests through loss of contiguous forested parcels and conversion to herbaceous community. w/o pres or current with 7 5
.500(6)(b)Water Environment (n/a for uplands) Clearing the canopy will impact the water environment variable, converting forested system to a freshwater marsh, although silt fencing will reduce temporary turbidity impacts w/o pres or current with 8 6
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community Clearing of canopy will convert the system to a freshwater marsh community with significant loss of functional value compared to existing forested system. w/o pres or current with 9 4

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres with
0.80 0.50

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = - (0.3 *0.41) = 0.12

Delta = [with-current]
-0.30

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: OUC - McIntosh to Lake Agnes

WETLAND ID: 40A/B (Unnamed Creek and
Floodplain)
Stream/Mixed Wetland Forest/Freshwater Marsh (FLUCOVERALL UMAM SCORE
0.80

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirement	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	7
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotic	7
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	7
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	8
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	6
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restriction	partially limited	substantially limited	no benefits to downstream areas	9
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	7
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
7

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	7
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	8
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soil drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	7
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rate	7
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	8
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	8
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animal	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirement	7
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	7
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	8
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	N/A

WATER ENVIRONMENT SCORE
8

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	9
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	9
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	7
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	9
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	7
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	8
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure into of ditches or furrows	7
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	9
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
9

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes		Application Number		Assessment Area Name or Number Wetlands 4A, 4B, 27A, 35A, 36A, 37D, 44A, 45A, 48A, 49A, 54A, 54B, 54C, 60A	
FLUCCs code 511 - Ditches		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 8.37 acres
Basin/Watershed Name/Number	Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The majority of the ditches are isolated and are located along road ROWs and pasture areas. Some are hydrologically connected to freshwater marshes.					
Assessment area description There are a several ditched areas occurring along the transmission corridor; some only occasionally inundated and others typically perennially containing water. They are vegetated with a mixture of species such as dogfennel (<i>Eupatorium capillifolium</i>), ceasar weed (<i>Urena lobata</i>), swamp smartweed (<i>Polygonum hydropiperoides</i>), annual saltmarsh aster (<i>Symphiotrichum subulatum</i>), bristlegrass (<i>Setaria</i> spp.), frogfruit (<i>Phyla nodiflora</i>), yellow flatsedge (<i>Cyperus flavescens</i>), soft rush (<i>Juncus effusus</i>), cattail (<i>Typha</i> sp.), rattle-box (<i>Sesbania</i> spp.), Brazilian pepper (<i>Schinus terebinthifolius</i>), pickerelweed (<i>Pontederia cordata</i>), willow (<i>Salix</i> spp.), maiden fern (<i>Thelypteris</i> spp.), saltwater false willow (<i>Baccharis angustifolia</i>), cranebill (<i>Geranium</i> spp.), paragrass (<i>Urochloa mutica</i>), bermudagrass (<i>Cynodon dactylon</i>), Peruvian primrosewillow (<i>Ludwigia peruviana</i>), and torpedo grass (<i>Panicum repens</i>).					
Significant nearby features transmission line and road ROWs			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions drainage			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (SSC), wood stork (E), and little blue heron (SSC).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Several bird and mammal species were observed at the time of the site visit, including cardinal, American crow, northern mockingbird, catbird, wood stork, northern harrier, eastern meadowlark, osprey, loggerhead shrike, killdeer, brown thrasher, quail, rabbit, raccoon, and feral hog.					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, M. Arrants			Assessment date(s): December-07		

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes	Application Number	Assessment Area Name or Number Wetlands 4A, 4B, 27A, 35A, 36A, 37D, 44A, 45A, 48A, 49A, 54A, 54B, 54C, 60A (FLUCFCS 511)
Impact or Mitigation Impact	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 4 with 0	Location and landscape support variable is decreased due to proximity of highways and transmission line ROW. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 5 with 0	The water environment of the ditches exhibits mostly typical conditions; however some impacts are present due to drought. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 6 with 0	Wetlands are dominated by a mixture of native and exotic/invasive species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.50 with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = (0.50 x 0.21) = 0.11

Delta = [with-current]
-0.50

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirements	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	4
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	4
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	4
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	4
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	4
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restrictions	partially limited	substantially limited	no benefits to downstream areas	4
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	4
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
4

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	4
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	5
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soils drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	7
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	6
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	6
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	5
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animals	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	5
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	4
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	4
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	7

WATER ENVIRONMENT SCORE
5

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	5
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	6
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	6
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	7
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	7
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	N/A
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	N/A
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	7
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
6

**PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)**

Site/Project Name OUC- McIntosh to Lake Agnes		Application Number		Assessment Area Name or Number Wetlands 8A, 14A/14B, 23A, 23B, 26A, 39, 46B, 46C, 49B	
FLUCCs code 534 - Reservoirs<10 acres		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 8.22 acres
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Many are isolated, located within pastures and commercial, residential, and disturbed areas. Some are hydrologically connected to freshwater marshes and wet prairies.					
Assessment area description Several small reservoirs exist along the transmission corridor ROW and serve as stormwater retention basins. The banks and littoral zones are vegetated with a mix of species that include torpedo grass (<i>Panicum repens</i>), swamp smartweed (<i>Polygonum hydropiperoides</i>), marsh pennywort (<i>Hydrocotyle</i> spp.), spikerush (<i>Eleocharis</i> spp.), cypress (<i>Taxodium</i> spp.), willows (<i>Salix</i> spp.), maidencane (<i>Panicum hemitomon</i>), frogfruit (<i>Phyla nodiflora</i>), water hyacinth (<i>Eichornia crassipes</i>), duckweed (<i>Lemna</i> spp.), piedmont primrosewillow (<i>Ludwigia arcuata</i>), dogfennel (<i>Eupatorium capillifolium</i>), saltwater falsewillow (<i>Baccharis</i> spp.), bluestem (<i>Andropogon</i> spp.), Peruvian primrosewillow (<i>Ludwigia peruviana</i>), sedges (<i>Carex</i> spp.), flatsedges (<i>Cyperus</i> spp.), bristlegass (<i>Setaria</i> spp.), bulltongue arrowhead (<i>Sagittaria lancifolia</i>), anglestem primrosewillow (<i>Ludwigia leptocarpa</i>), umbrellasedge (<i>Fuirena</i> spp.), rustweed (<i>Polypremum procumbens</i>), greenwhite sedge (<i>Carex albolutescens</i>), alligatorweed (<i>Alternanthera phioxeroides</i>), soft rush (<i>Juncus effusus</i>), wax myrtle (<i>Myrica cerifera</i>), Virginia chain fern (<i>Woodwardia virginica</i>), maiden fern (<i>Thelypteris</i> spp.), buttonbush (<i>Cephalanthus occidentalis</i>), cattail (<i>Typha</i> spp.), and Brazilian pepper (<i>Schinus terebinthifolius</i>).					
Significant nearby features Transmission lines, roadways, McIntosh Plant, Teneroc Fish Management Area		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Water treatment and storage		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (SSC), wood stork (E), and little blue heron (SSC)			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Kingfisher, osprey, great egret, Northern harrier, commorant, white ibis (SSC), anhinga, tricolored heron (SSC), and little blue heron (SSC) were observed during the site visit.					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, M. Arrants		Assessment date(s): December-07			

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes	Application Number	Assessment Area Name or Number Wetlands 8A, 14A/14B, 23A, 23B, 26A, 39, 46B, 46C, 49B (FLUCFCS 534)
Impact or Mitigation Impact	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 4 with 0	Location and landscape support variable is decreased due to location within pastures and commercial, residential, and disturbed areas. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 5 with 0	The water environment variable is reduced due to artificial nature of reservoirs. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 5 with 0	Wetlands are dominated by a mixture of native and exotic/invasive species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.47
with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = (0.47 x 0.06) = 0.03

Delta = [with-current]
-0.47

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: OUC-McIntosh to Lake Agnes

WETLAND ID: 8A, 14A/14B, 23A, 23B,
26A, 39, 46B, 46C, 49B
Reservoirs (534)OVERALL UMAM SCORE
0.47

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirement:	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	4
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	4
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	4
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	4
e	Effects of land use outside of area on wildlife	no ill effects	minimal impact:	substantial impacts	severe impacts	4
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restriction	partially limited	substantially limited	no benefits to downstream areas	5
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment are	little or no benefit to downstream areas	4
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
4

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	4
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	5
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soil drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	4
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	5
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	5
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	6
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animal:	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	6
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	5
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	4
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	5

WATER ENVIRONMENT SCORE
5

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	6
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	5
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	5
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	5
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	5
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	N/A
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	N/A
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	4
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
5

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes		Application Number		Assessment Area Name or Number Wetlands 37A, 43A, 44B	
FLUCCs code 621 - Cypress		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 3.76 acres
Basin/Watershed Name/Number	Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The cypress swamps are located adjacent to the transmission line ROW, I-4, and pastureland. They are hydrologically connected to mixed forested wetlands and freshwater marshes.					
Assessment area description Cypress communities are vegetated primarily by pond cypress (<i>Taxodium ascendans</i>) or bald cypress (<i>Taxodium distichum</i>). Three cypress wetlands exist along the transmission corridor ROW. Additional vegetation includes sawtooth blackberry (<i>Rubus argutus</i>), torpedo grass (<i>Panicum repens</i>), soft rush (<i>Juncus effusus</i>), Peruvian primrosewillow (<i>Ludwigia peruviana</i>), groundsel tree (<i>Baccharis halimifolia</i>), dogfennel (<i>Eupatorium capillifolium</i>), climbing aster (<i>Aster carolinianus</i>), tropical soda apple (<i>Solanum viarum</i>), swamp smartweed (<i>Polygonum hydropiperoides</i>), and wax myrtle (<i>Myrica cerifera</i>).					
Significant nearby features I-4 and transmission line ROWs			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Wildlife habitat, natural water treatment and storage			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (SSC), wood stork (E), and little blue heron (SSC).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Black vultures were observed during the site visit.					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, M. Arrants			Assessment date(s): December-07		

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes	Application Number	Assessment Area Name or Number Wetlands 37A, 43A, 44B (FLUCFCS 621)
Impact or Mitigation Impact - Fill	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 7 with 0	Wetlands are located near pasturelands and the transmission line and I-4 ROW, but they are hydrologically connected to freshwater marshes and mixed forested wetlands. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 8 with 0	The water environment variable is slightly reduced to to hydrologic alteration resulting from adjacent roadways and land clearing, but water conditions are generally typical of a cypress system. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 9 with 0	Wetland vegetation dominated by native wetland species, minimal colonization by nuisance/exotic species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.80 with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = (0.80 x 0.14) = 0.11

Delta = [with-current]
-0.80

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART IIB – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes	Application Number	Assessment Area Name or Number Wetlands 37A, 43A, 44B (FLUCFCS 621)
Impact or Mitigation Impact - Clearing	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 7 with 5	Loss of canopy species associated with clearing the transmission line ROW would reduce the location and landscape support variable for wetland forests through loss of contiguous forested parcels and conversion to herbaceous community.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 8 with 6	Clearing the canopy will impact the water environment variable, converting forested system to a freshwater marsh, although silt fencing will reduce temporary turbidity impacts
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 9 with 4	Clearing of canopy will convert the system to a freshwater marsh community with significant loss of functional value compared to existing forested system.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.80	0.50

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = - (0.3 *1.25) = 0.38

Delta = [with-current]
-0.30

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: OUC-McIntosh to Lake Agnes

WETLAND ID: 37A, 43A, 44B
Cypress (621)OVERALL UMAM SCORE
0.80

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirement:	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	7
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	7
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	6
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	8
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	7
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restriction	partially limited	substantially limited	no benefits to downstream areas	8
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	6
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
7

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	7
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	7
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soil drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	7
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	8
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	8
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	8
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	7
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animal	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	7
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	8
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	N/A
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	N/A

WATER ENVIRONMENT SCORE
8

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	9
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	7
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	9
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	9
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	8
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	8
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	N/A
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	8
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
9

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes		Application Number		Assessment Area Name or Number Wetland 6A	
FLUCCs code 631 - Wetland Scrub		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 0.36
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The wetland is isolated from other wetlands, and is surrounded by roadways and the McIntosh Plant to the northwest.					
Assessment area description Wetland 6A is vegetated with a mixture of native and exotic species including willow (<i>Salix carolinana</i>), dogfennel (<i>Eupatorium capillifolium</i>), Peruvian primrosewillow (<i>Ludwigia peruviana</i>), Brazilian pepper (<i>Schinus terebinthifolius</i>), royal fern (<i>Osmunda regalis</i> var. <i>spectabilis</i>), maiden fern (<i>Thelypteris</i> spp.), elderberry (<i>Sambucus nigra</i>), sedges (<i>Carex</i> spp.), woolgrass (<i>Scirpus cyperinus</i>), saltwater false willow (<i>Baccharis angustifolia</i>), broom grass (<i>Andropogon glomeratus</i>), and smutgrass (<i>Sporobolus indicus</i>).					
Significant nearby features Transmission lines, roadways, McIntosh Plant		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Water storage and drainage		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) None		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) None			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No wildlife species were observed during the site visit.					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, M. Arrants		Assessment date(s): December-07			

PART II A – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes	Application Number	Assessment Area Name or Number Wetland 6A (FLUCFCS 631)
Impact or Mitigation Existing Condition	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 6 with 0	Location and landscape support variable decreased due to proximity of roadways and the McIntosh Plant. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 6 with 0	The water environment is reduced due to hydrologic alteration associated with roadways and adjacent development. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 7 with 0	Wetland dominated by a mixture of native and exotic/nuisance species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.63 with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
-0.63

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: OUC-McIntosh to Lake Agnes

WETLAND ID: 6A
Wetland Scrub (631)

OVERALL UMAM SCORE
0.63

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirement:	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	5
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	6
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	5
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	6
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	6
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restriction	partially limited	substantially limited	no benefits to downstream areas	3
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment are	little or no benefit to downstream areas	3
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	5
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	6
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soil drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	5
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	6
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	6
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	7
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	5
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animal	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	5
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	6
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	N/A
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	N/A

WATER ENVIRONMENT SCORE
6

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	7
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	6
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	7
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	6
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	6
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	6
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	5
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	N/A
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
7

**PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)**

Site/Project Name OUC- McIntosh to Lake Agnes		Application Number		Assessment Area Name or Number Wetlands 8B, 12A, 13C, 16A/18A, 19A, 22A/B, 27B, 29A, 33A, 33B, 34B, 35B, 35C, 35D, 37B, 39A, 43B, 47A, 48B, 48C, 60B, 60C	
FLUCCs code 641 - Freshwater Marshes		Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 39.09
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetlands are located near the McIntosh Plant, and along I-4 and the transmission line ROW. Some are hydrologically connected to mixed wetland hardwoods within the Teneroc Fish Management Area, and some are connected to mixed forested wetlands and reservoirs within the transmission line corridor. Most are isolated.					
Assessment area description Freshwater marsh wetlands are common along the ROW. These habitats are dominated by emergent herbaceous species, including frogfruit (<i>Phyla nodiflora</i>), jessamine (<i>Gelsemium</i> spp.), alligatorweed (<i>Alternanthera philoxeroides</i>), doveweed (<i>Murdannia nudiflora</i>), bristlegrass (<i>Setaria</i> spp.), bahiagrass (<i>Paspalum notatum</i>), flatsedges (<i>Cyperus</i> spp.), American pokeweed (<i>Phytolacca americana</i>), Virginia chain fern (<i>Woodwardia virginica</i>), Carolina redroot (<i>Lachnanthes caroliana</i>), soft rush (<i>Juncus effusus</i>), swamp smartweed (<i>Juncus effusus</i>), cattail (<i>Typha</i> spp.), cordgrass (<i>Spartina</i> spp.), bedstraw (<i>Galium</i> spp.), maidencane (<i>Panicum hemitomon</i>), blue maidencane (<i>Amphicarpum muhlenbergianum</i>), torpedo grass (<i>Panicum repens</i>), and castorbean (<i>Ricinus communis</i>). Common shrub species include piedmont staggerbush (<i>Lyonia mariana</i>), rattle-box (<i>Sesbania</i> spp.), piedmont primrosewillow (<i>Ludwigia arcuata</i>), spikerush (<i>Eleocharis</i> spp.), dogfennel (<i>Eupatorium capillifolium</i>), sweetbroom (<i>Scoparia dulcis</i>), Brazilian pepper (<i>Schinus terebinthifolius</i>), elderberry (<i>Sambucus canadensis</i>), buttonbush (<i>Cephalanthus occidentalis</i>), and Peruvian primrosewillow (<i>Ludwigia peruviana</i>), as well as occasional willow (<i>Salix</i> spp.), false willow (<i>Baccharis</i> spp.), red maple (<i>Acer rubrum</i>), and wax myrtle (<i>Myrica cerifera</i>).					
Significant nearby features OUC McIntosh Plant, I-4		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Wildlife habitat, natural water treatment and storage		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (SSC), wood stork (E), and little blue heron (SSC).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Black vulture, eastern meadowlark, osprey, northern mockingbird and evidence of coyote were observed during the site visit.					
Additional relevant factors:					
Assessment conducted by: S. Rizzo, M. Arrants		Assessment date(s): 12/6/2007- 12/11/2007			

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC McIntosh Substation - Lake Agnes Substation	Application Number	Assessment Area Name or Number Wetlands 8B, 12A, 13C, 16A/18A, 19A, 22A/B, 27B, 29A, 33A, 33B, 34B, 35B, 35C, 35D, 37B, 39A, 43B, 47A, 48B, 48C, 60B, 60C
Impact or Mitigation Impact	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current with 6 0	Location and landscape support variable is decreased due to proximity of roadways, the McIntosh Plant, and transmission lines. Some wetlands are hydrologically connected to forested systems. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0	The water environment is somewhat reduced due to proximity of roadways, adjacent development, and cleared ROW. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 8 0	Wetlands are dominated by a mixture of native and exotic/invasive species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.70	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = (0.70 x 2.86) = 2.0

Delta = [with-current]
-0.70

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements o wildlife	fulfill most but not all requirement	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	7
b	Invasive exotics and other exotic	Not present	some invasive exotics in plant communit	many invasive exotics and other exotics ir community	plant community consists mainly of invasive exotics	5
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blockec	6
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	7
e	Effects of land use outside of area on wildlif	no ill effects	minimal impacts	substantial impacts	severe impacts	6
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restriction	partially limited	substantially limited	no benefits to downstream areas	7
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrolog	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream area	5
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	7
b	Water level indicators in relation to type of system being evaluated	distinct water level indicator	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	7
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soil drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	6
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rate	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rate	7
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	6
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	7
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, sign of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	7
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animal	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	7
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	7
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	N/A
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetrator	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	N/A

WATER ENVIRONMENT SCORE
7

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	8
b	Presence of invasive exotics or other exotic	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	7
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	8
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviator	high percentage of dead or dying vegetation	7
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	8
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	7
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	7
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
8

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes		Application Number		Assessment Area Name or Number Wetlands 34A, 34C, 36B, 36C, 37C	
FLUCCs code 643 - Wet Prairies		Further classification (optional)		Impact or Mitigation Site? Impact	
				Assessment Area Size 0.18 acres	
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wet prairies are located within the transmission line ROW, mostly adjacent to I-4. All are isolated from other wetlands.					
Assessment area description Wet prairie is an infrequently inundated wetland habitat with predominantly herbaceous vegetation occurring upon hydric soils. Wet prairie habitat occurs within improved pasture areas of the ROW and supports low growth of wetland species including thin paspalum (<i>Paspalum setaceum</i>), bahiagrass (<i>Paspalum notatum</i>), maidencane (<i>Panicum hemitomon</i>), spikerush (<i>Eleocharis</i> spp.), sweetbroom (<i>Scoparia dulcis</i>), Eastern blue-eyed grass (<i>Sisyrinchium atlanticum</i>), bedstraw (<i>Galium tinctorium</i>), mermaid weed (<i>Proserpinaca</i> spp.), sedges (<i>Carex</i> spp.), swamp smartweed (<i>Polygonum hydropiperoides</i>), marsh pennywort (<i>Hydrocotyle umbellata</i>), coinwort (<i>Centella asiatica</i>), bog buttons (<i>Lachnocaulon</i> spp.), and soft rush (<i>Juncus effusus</i>). Some wet prairie areas within the ROW are impacted by cattle grazing, which tramples vegetation, results in soil compaction, and also increases turbidity and erosion.					
Significant nearby features transmission line and I-4 ROW		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Wildlife habitat, natural water treatment and storage		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, deer, and feral hogs		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as white ibis (SSC), wood stork (E), and little blue heron (SSC).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of feral hogs was observed during the site visit.					
Additional relevant factors: 					
Assessment conducted by: S. Rizzo, M. Arrants		Assessment date(s): 12/6/2007- 12/11/2007			

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name OUC- McIntosh to Lake Agnes	Application Number	Assessment Area Name or Number Wetlands 34A, 34C, 36B, 36C, 37C
Impact or Mitigation Impact	Assessment conducted by: S. Rizzo, M. Arrants	Assessment date: Dec-07

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support w/o pres or current 6 with 0	Location and landscape support variable decreased due to proximity of roadways and transmission lines and presence of exotics. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 with 0	The water environment variable is reduced somewhat due to hydrologic alteration resulting from roadways, ROW clearing, and adjacent development. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 7 with 0	Wetlands dominated by a mixture of native and exotic/nuisance species. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.67 with 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = (0.67 x 0.02) = 0.01

Delta = [with-current]
-0.67

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: OUC-McIntosh to Lake Agnes

WETLAND ID: 34A, 34C, 36B, 36C, 37C
Wet Prairies (643)OVERALL UMAM SCORE
0.67

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirement	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	6
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	6
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	6
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	5
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	6
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restriction	partially limited	substantially limited	no benefits to downstream areas	7
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	6
h	for upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	7
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	6
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soil drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	7
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	6
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	7
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	7
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animal	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirement	6
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	7
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	N/A
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	N/A

WATER ENVIRONMENT SCORE
7

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	7
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	6
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	7
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	7
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	7
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure introduction of ditches or furrows	6
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	6
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
7